SANYO INSTALLATION AND OPERATION MANUAL

– ECO-i System Air Conditioner –

for Refrigerant R410A

■ R410A Models
Indoor Units

SPW-UMR74EXH56
SPW-UMR94EXH56
SPW-UMR124EXH56
SPW-UMR164EXH56
SPW-UMR184EXH56
SPW-UMR224EXH56

Outdoor Units

C	DC Inverter Main Unit	SPW-CR604GDXH8, SPW-CR704GDXH8, SPW-CR904GDXH8, SPW-CR1154GDXH8
	Constant Speed (Sub) Unit	SPW-CR704GDCH8, SPW-CR904GDCH8, SPW-CR1154GDCH8

* Refrigerant R410A is used in the outdoor units.

Optional Controllers

RC	Remote Controller	RCS-SH80AG
	Wireless Remote Controller	RCS-BH80AG.WL
	Simplified Remote Controller	RCS-KR1AG

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IMPORTANT!
Please Read Before Starting

This air conditioning system meets strict safety and operating standards. As the installer or service person, it is an important part of your job to install or service the system so it operates safely and efficiently.

For safe installation and trouble-free operation, you must:

- Carefully read this instruction booklet before beginning.
- Follow each installation or repair step exactly as shown.
- Observe all local, state, and national electrical codes.
- This product is intended for professional use.
  Permission from the power supplier is required when installing an outdoor unit that is connected to a 16 A distribution network.
- Pay close attention to all warning and caution notices given in this manual.

WARNING This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.

CAUTION This symbol refers to a hazard or unsafe practice which can result in personal injury or product or property damage.

If Necessary, Get Help

These instructions are all you need for most installation sites and maintenance conditions. If you require help for a special problem, contact our sales/service outlet or your certified dealer for additional instructions.

In Case of Improper Installation

The manufacturer shall in no way be responsible for improper installation or maintenance service, including failure to follow the instructions in this document.

SPECIAL PRECAUTIONS

WARNING When Wiring

ELECTRICAL SHOCK CAN CAUSE SEVERE PERSONAL INJURY OR DEATH. ONLY A QUALIFIED, EXPERIENCED ELECTRICIAN SHOULD ATTEMPT TO WIRE THIS SYSTEM.

- Do not supply power to the unit until all wiring and tubing are completed or reconnected and checked.
- Highly dangerous electrical voltages are used in this system. Carefully refer to the wiring diagram and these instructions when wiring. Improper connections and inadequate grounding can cause **accidental injury or death.**
- **Ground the unit** following local electrical codes.
- Connect all wiring tightly. Loose wiring may cause overheating at connection points and a possible fire hazard.

When Transporting

Be careful when picking up and moving the indoor and outdoor units. Get a partner to help, and bend your knees when lifting to reduce strain on your back. Sharp edges or thin aluminum fins on the air conditioner can cut your fingers.

When Installing…

…In a Room

Properly insulate any tubing run inside a room to prevent "sweating" that can cause dripping and water damage to walls and floors.

…In Moist or Uneven Locations

Use a raised concrete pad or concrete blocks to provide a solid, level foundation for the outdoor unit. This prevents water damage and abnormal vibration.

…In an area with High Winds

Securely anchor the outdoor unit down with bolts and a metal frame. Provide a suitable air baffle.

…In a Snowy Area (for Heat Pump-type Systems)

Install the outdoor unit on a raised platform that is higher than drifting snow. Provide snow vents.

When Connecting Refrigerant Tubing

- Ventilate the room well, in the event that is refrigerant gas leaks during the installation. Be careful not to allow contact of the refrigerant gas with a flame as this will cause the generation of poisonous gas.
- Keep all tubing runs as short as possible.
- Use the flare method for connecting tubing.
- Apply refrigerant lubricant to the matching surfaces of the flare and union tubes before connecting them, then tighten the nut with a torque wrench for a leak-free connection.
- Check carefully for leaks before starting the test run.

NOTE

Depending on the system type, liquid and gas lines may be either narrow or wide. Therefore, to avoid confusion the refrigerant tubing for your particular model is specified as either "narrow" or "wide" than as "liquid" or "gas."

When Servicing

- Turn the power OFF at the main power box (mains) before opening the unit to check or repair electrical parts and wiring.
- Keep your fingers and clothing away from any moving parts.
- Clean up the site after you finish, remembering to check that no metal scraps or bits of wiring have been left inside the unit being serviced.

CAUTION

- Ventilate any enclosed areas when installing or testing the refrigeration system. Escaped refrigerant gas, on contact with fire or heat, can produce dangerously toxic gas.
- Confirm after installation that no refrigerant gas is leaking. If the gas comes in contact with a burning stove, gas water heater, electric room heater or other heat source, it can cause the generation of poisonous gas.

Check of Density Limit

The room in which the air conditioner is to be installed requires a design that in the event of refrigerant gas leaking out, its density will not exceed a set limit.

The refrigerant (R410A), which is used in the air conditioner, is safe, without the toxicity or combustibility of ammonia, and is not restricted by laws imposed to protect the ozone layer. However, since it contains more than air, it poses the risk of suffocation if its density should rise excessively. Suffocation from leakage of refrigerant is almost non-existent. With the recent increase in the number of high density buildings, however, the installation of multi air conditioner systems is on the increase because of the need for effective use of floor space, individual control, energy conservation by curtailing heat and carrying power, etc.
Most importantly, the multi air conditioner system is able to replenish a large amount of refrigerant compared to conventional individual air conditioners. If a single unit of the multi air conditioner system is to be installed in a small room, select a suitable model and installation procedure so that if the refrigerant accidentally leaks out, its density does not reach the limit (and in the event of an emergency, measures can be made before injury can occur).
In a room where the density may exceed the limit, create an opening with adjacent rooms, or install mechanical ventilation combined with a gas leak detection device. The density is as given below.

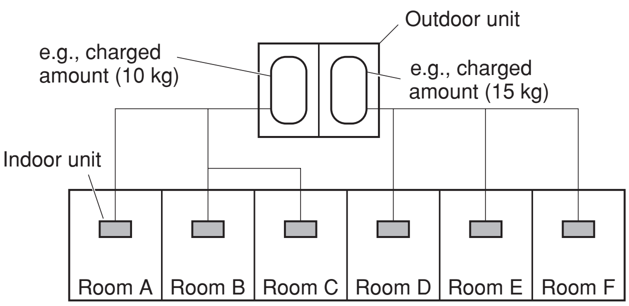
$$\frac{\textbf{Total amount of refrigerant (kg)}}{\textbf{Min. volume of the indoor unit installed room (m}^3\textbf{)}} \le \textbf{Density limit (kg/m}^3\textbf{)}$$

The density limit of refrigerant which is used in multi air conditioners is 0.3 kg/m^3 (ISO 5149).

NOTE

1. If there are 2 or more refrigerating systems in a single refrigerating device, the amount of refrigerant should be as charged in each independent device.

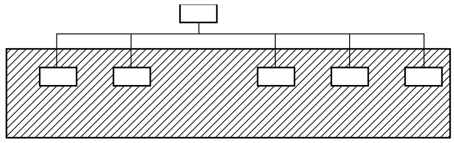
For the amount of charge in this example:



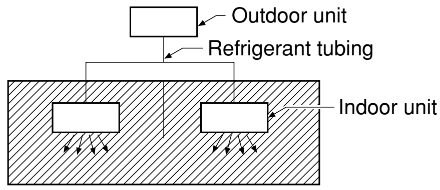
The possible amount of leaked refrigerant gas in rooms A, B and C is 10 kg.
The possible amount of leaked refrigerant gas in rooms D, E and F is 15 kg.

2. The standards for minimum room volume are as follows.

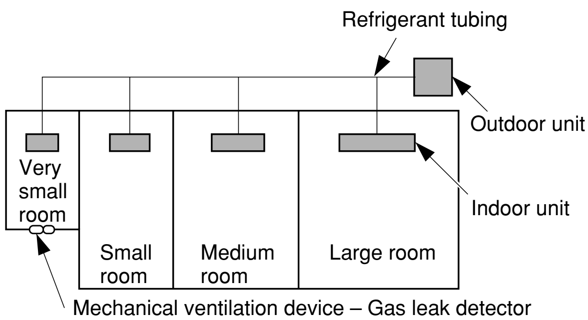
(1) No partition (shaded portion)



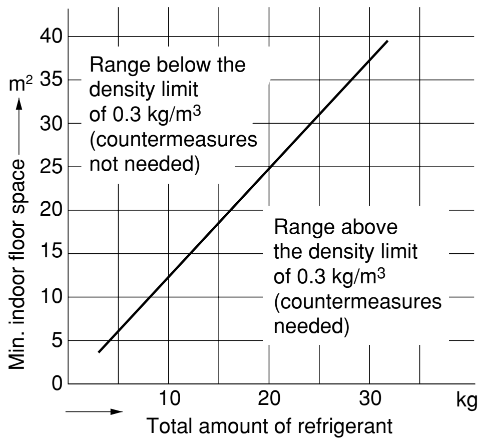
(2) When there is an effective opening with the adjacent room for ventilation of leaking refrigerant gas (opening without a door, or an opening 0.15% or larger than the respective floor spaces at the top or bottom of the door).



(3) If an indoor unit is installed in each partitioned room and the refrigerant tubing is interconnected, the smallest room of course becomes the object. But when mechanical ventilation is installed interlocked with a gas leakage detector in the smallest room where the density limit is exceeded, the volume of the next smallest room becomes the object.



3. The minimum indoor floor space compared with the amount of refrigerant is roughly as follows: (When the ceiling is 2.7 m high)



CONTENTS

1. GENERAL

This booklet briefly outlines where and how to install the air conditioning system. Please read over the entire set of instructions for the indoor unit and make sure all accessory parts listed are with the system before beginning.

1-1. Tools Required for Installation (not supplied)

1. Standard screwdriver
2. Phillips head screwdriver
3. Knife or wire stripper
4. Tape measure
5. Carpenter's level
6. Sabre saw or key hole saw
7. Hacksaw
8. Core bits
9. Hammer
10. Drill
11. Tube cutter
12. Tube flaring tool
13. Torque wrench
14. Adjustable wrench
15. Reamer (for deburring)

1-2. Type of Copper Tube and Insulation Material

If you wish to purchase these materials separately from a local source, you will need:

1. Deoxidized annealed copper tube for refrigerant tubing.
2. Foamed polyethylene insulation for copper tubes as required to precise length of tubing. Wall thickness of the insulation should be not less than 8 mm.
3. Use insulated copper wire for field wiring. Wire size varies with the total length of wiring. Refer to **4. Electrical Wiring** for details.

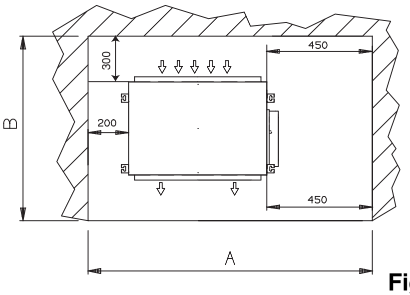
CAUTION **Check local electrical codes and regulations before obtaining wire. Also, check any specified instructions or limitations.**

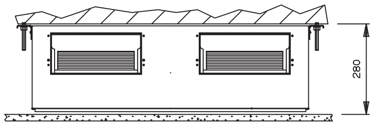
1-3. Additional Materials Required for Installation

1. Refrigeration (armored) tape
2. Insulated staples or clamps for connecting wire (See your local codes.)
3. Putty
4. Refrigeration tubing lubricant
5. Clamps or saddles to secure refrigerant tubing
6. Scale for weighing

2. HOW TO INSTALL THE UNIT

Minimum operation and maintenance area. (fig. 2-1)





	A	B
7/9/12	1500	1100
16/18/22	1700	1100

Fig. 2-1

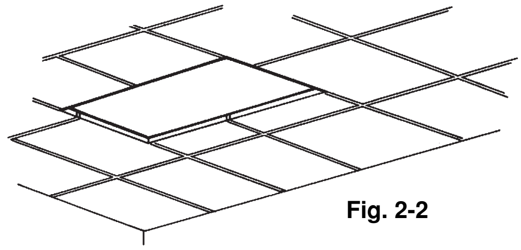


Fig. 2-2

Find the space for the installation of the return air grille and mark the opening to do. Cut the falseceiling. (fig. 2-2)

Use rawl plug suitable to the ceiling consistence and four M10 threaded bars of suitable length (not supplied). (fig. 2-3)

Mark on the ceiling the holes for the hanging rods, verify the distance of the centres. The value included in the brackets is referred to the model X18. (fig. 2-4)

Drill a 80 mm diameter hole, for the passage of refrigeration pipework, condensate pipework and electrical cable. Insert a PVC pipe in the wall. (fig. 2-5)

Secure the unit in position with locknuts and washers, level the unit, keeping the right distance from the falseceiling for the installation of return air grille. (fig. 2-6)

Foresee a removable panel of the falseceiling for servicing. (fig. 2-7)

The unit is supplied with PVC hose from the condensate pump. Maximum pump lift is 250 mm over the unit. Convoy the condensate with a positive slope (min. 1:100) to the outside. The highest point in the condensate pipework should be as close to the unit as possible. This prevents a large volume of water draining back into the unit when it is switched off. (fig. 2-8)

Convoy the condensate to the outside with a positive slope, from a trap at the end if necessary. (fig. 2-9)

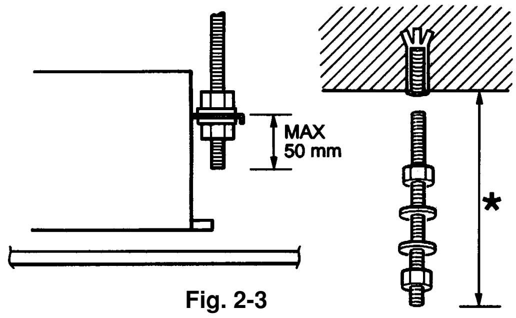


Fig. 2-3

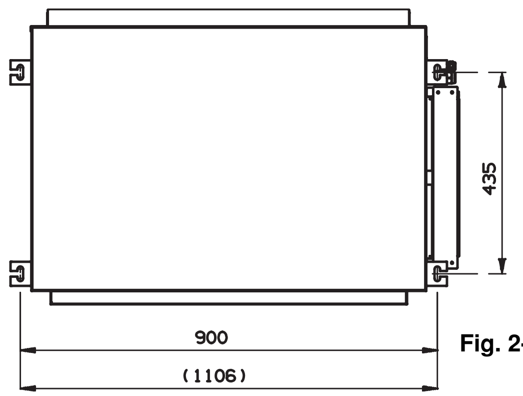


Fig. 2-4

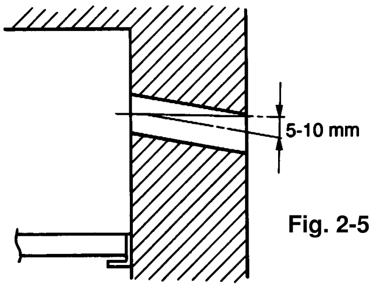


Fig. 2-5

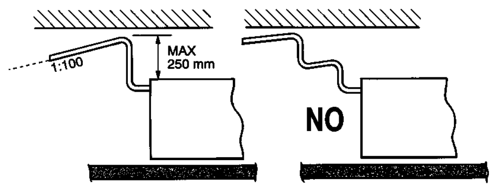


Fig. 2-8

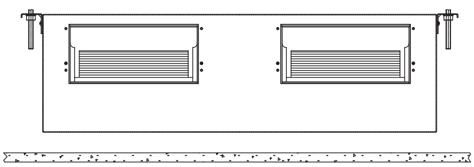


Fig. 2-6

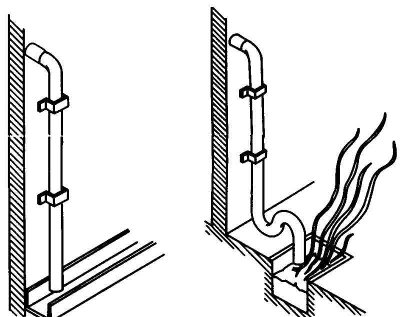


Fig. 2-9

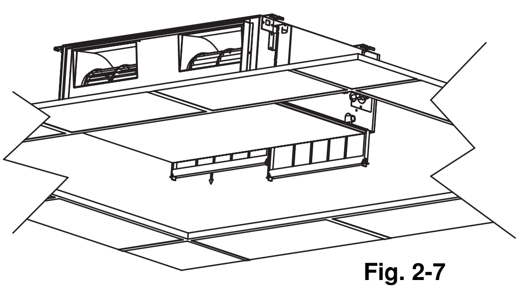


Fig. 2-7

On the front and rear side of the unit a rectangular port (with flange) helps during duct mounting. (fig. 2-10)

Rear and front flange for the air intake. The value included in the brackets is referred to the model X18. (fig. 2-11)

Discarge air duct (optional accessory).
Contact the After Sale Service. (fig. 2-12)

Remove the filter and pour, inside the condensate drain pan, 0.5 liter of water. Start the unit checking for proper drain pump operation. (fig. 2-13)

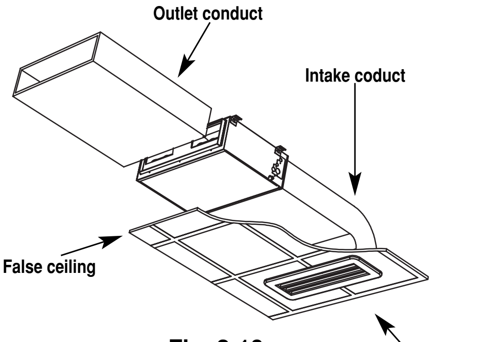


Fig. 2-10

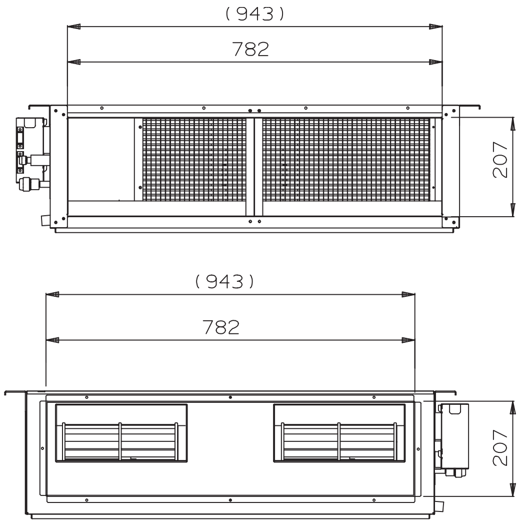
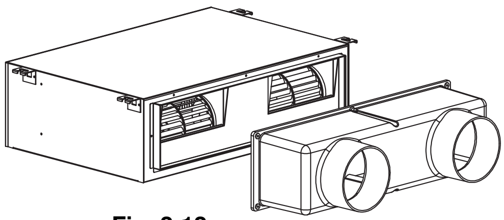
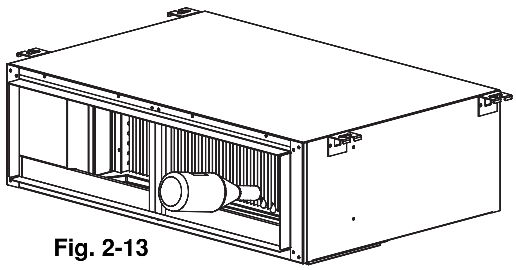
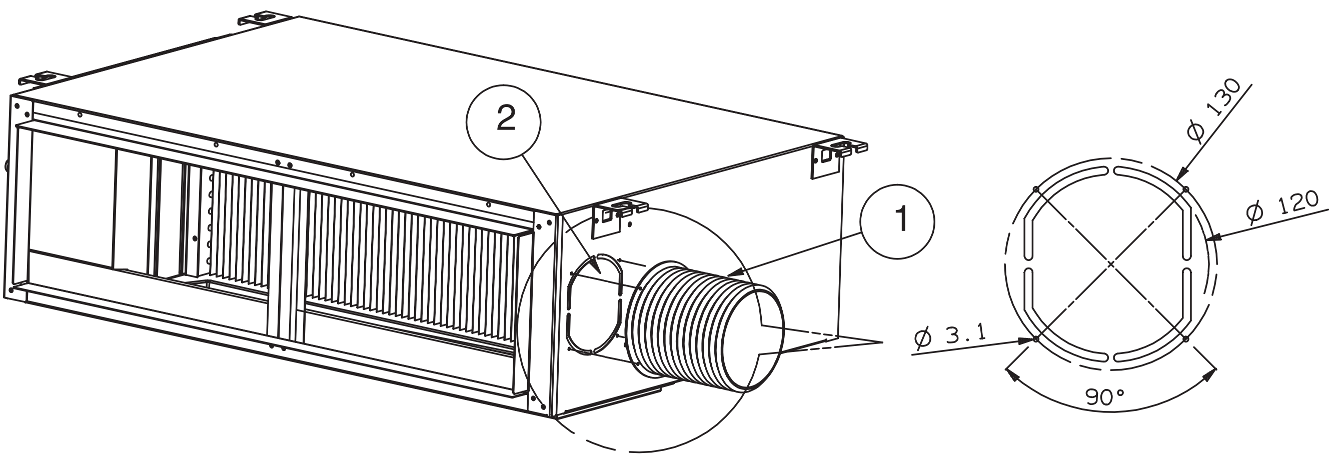


Fig. 2-11


Fig. 2-12


Fig. 2-13

2-1 Duct for fresh air



There is a duct connection port ① for drawing in fresh air.
The supplementary fan motor for outside air intake has to be supplied separately and controlled by a bipolar ON-OFF switch with safety fuses.
Fresh air flow must be about 10% of the total air flow to avoid operating problems and noise.

- Open the knock-out hole ② , fix a ∅ 120 mm flange on the unit and connect the thermically insulated duct.
- Install an outside grille with filter inspection port to prevent dust and leaves from entering and fouling the indoor unit heat exchanger.

3. TEST OF THE SYSTEM AND CONTROL OF THE AIR VOLUME TO THE OUTLET GRILLES

The unit is prearranged to supply an external static pressure of about 5 mm. Too high resistances in the air distribution system can cause an exceedingly small air volume to the outlet grilles.
This trouble can be solved by increasing the fan speed as follows:

Open the cover of the electrical junction box. Take out the booster cable clamped in the box. (fig. 3-1)

Disconnect the fan motor plug in the electrical box and insert the booster cable as a cable extension between the motor plug and the socket from the PCB. The external static pressure will increase to 7 mm w.g. Check static pressure and air flow rate on the fan performance graph. (fig. 3-2)

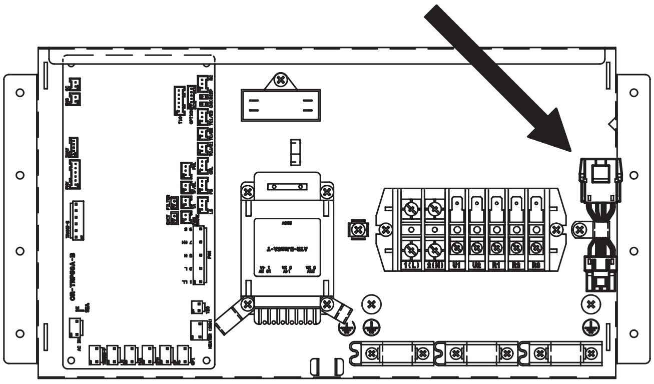


Fig. 3-1

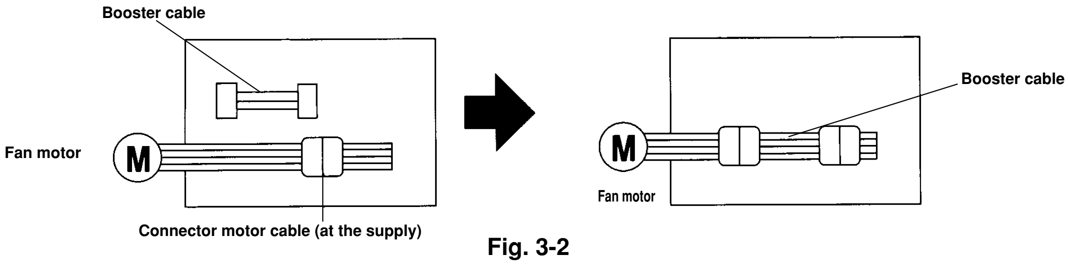
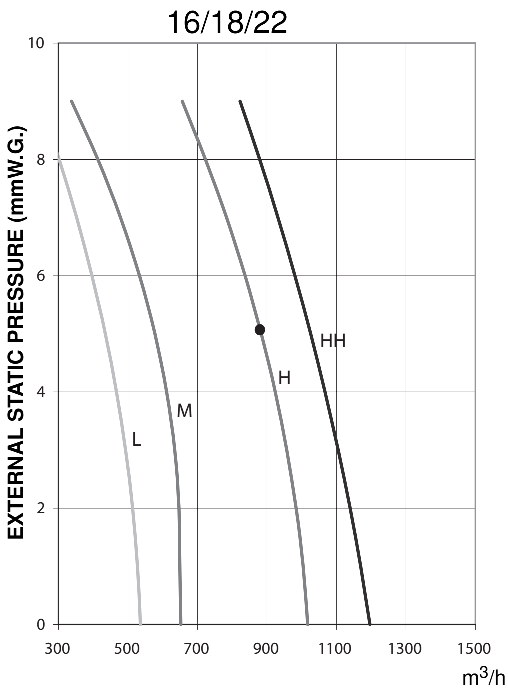
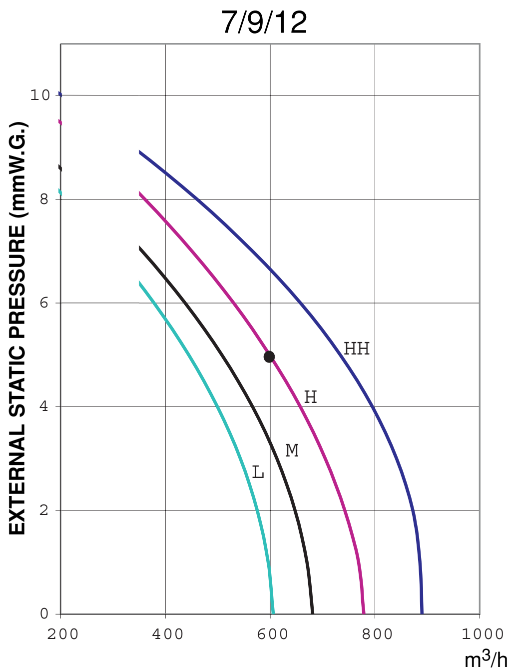


Fig. 3-2

H = High fan speed
L = Low fan speed
HH = Very high fan speed
M = Middle fan speed





- **H:** Standard supplied unit. Available fan speeds: Low-Middle-High (L - M - H). Max. static pressure: about 5 mm
  HH: Unit with cable extension of the fan motor (booster cable). Available fan speeds: Middle-High-Very high (M - H - HH). Max. static pressure: about 7 mm

4. ELECTRICAL WIRING

4-1. General Precautions on Wiring

(1) Before wiring, confirm the rated voltage of the unit as shown on its nameplate, then carry out the wiring closely following the wiring diagram.

(2) Provide a power outlet to be used exclusively for each unit, and a power supply disconnect and circuit breaker for overcurrent protection should be provided in the exclusive line.

(3) To prevent possible hazards from insulation failure, the unit must be grounded.

(4) Each wiring connection must be done in accordance with the wiring system diagram. Wrong wiring may cause the unit to misoperate or become damaged.

(5) Do not allow wiring to touch the refrigerant tubing, compressor, or any moving parts of the fan.

(6) Unauthorized changes in the internal wiring can be very dangerous. The manufacturer will accept no responsibility for any damage or misoperation that occurs as a result of such unauthorized changes.

(7) Regulations on wire diameters differ from locality to locality. For field wiring rules, please refer to your LOCAL ELECTRICAL CODES before beginning.

You must ensure that installation complies with all relevant rules and regulations.

(8) To prevent malfunction of the air conditioner caused by electrical noise, care must be taken when wiring as follows:

- The remote control wiring and the inter-unit control wiring should be wired apart from the inter-unit power wiring.
- Use shielded wires for inter-unit control wiring between units and ground the shield on both sides.

(9) If the power supply cord of this appliance is damaged, it must be replaced by a repair shop appointed by the manufacture, because special purpose tools are required.

4-2. Recommended Wire Length and Wire Diameter for Power Supply System

Outdoor unit

	(A) Power supply		Time delay fuse or circuit capacity		(A) Power supply		Time delay fuse or circuit capacity
	Wire size	Max. length			Wire size	Max. length	
SPW-CR604GDXH8	4 mm²	113 m	15 A		2.5 mm²	70 m	16A
SPW-CR704GDXH8	6 mm²	74 m	30 A		6 mm²	74 m	35A
SPW-CR904GDXH8	6 mm²	60 m	35 A	or	6 mm²	60 m	35A
SPW-CR1154GDXH8	6 mm²	55 m	40 A		10 mm²	91 m	50A
SPW-CR704GDCH8	6 mm²	47 m	35 A		6 mm²	47 m	35A
SPW-CR904GDCH8	6 mm²	46 m	40 A		10 mm²	77 m	50A
SPW-CR1154GDCH8	6 mm²	39 m	50 A		10 mm²	65 m	50A

Indoor unit

(B) Power supply	Time delay fuse or circuit capacity
2.5 mm²	
Max. 130 m	10 ~ 16A

Control wiring

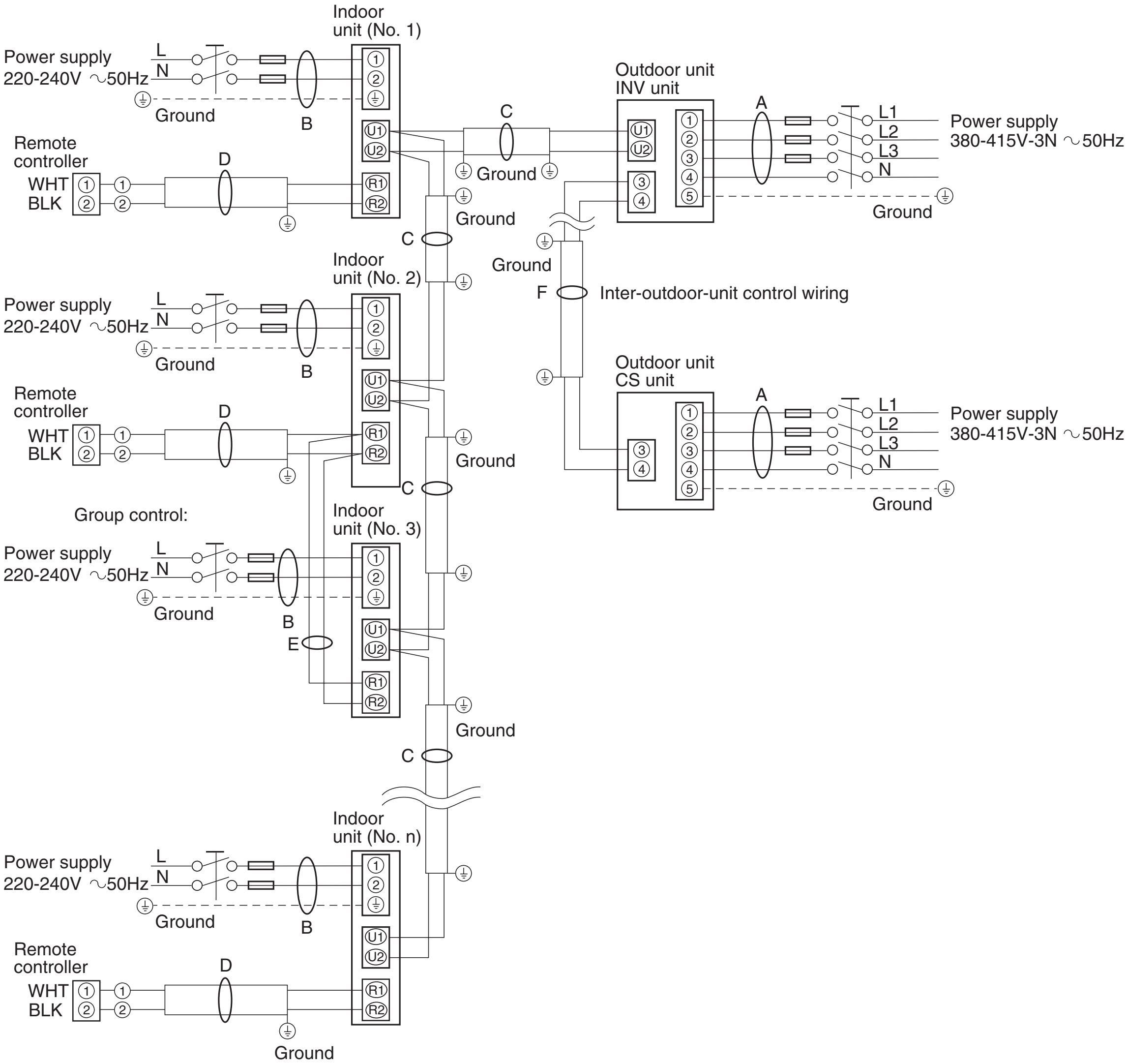
(C) Inter-unit (between outdoor and indoor units) control wiring	(D) Remote control wiring	(E) Control wiring for group control
0.75 mm² (AWG #18) **Use shielded wiring***	0.75 mm² (AWG #18) **Use shielded wiring**	0.75 mm² (AWG #18) **Use shielded wiring**
Max. 1,000 m	Max. 500 m	Max. 500 m (Total)

(F) Inter-outdoor unit control wiring
0.75 mm² (AWG #18) **Use shielded wiring**
Max. 500 m

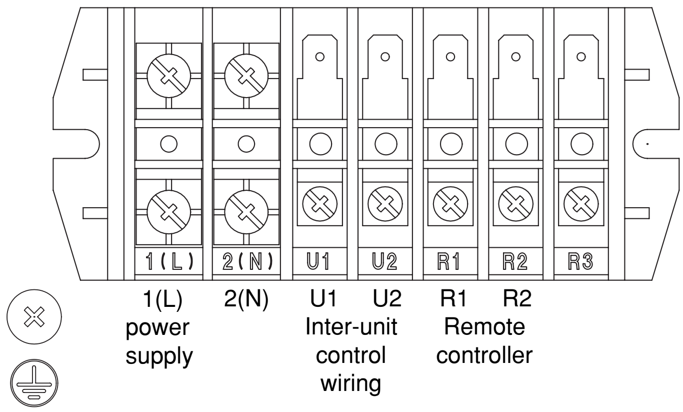
NOTE

* With ring-type wire terminal.

4-3. Wiring System Diagrams



7P terminal board



NOTE

(1) Refer to Section 5-2. "Recommended Wire Length and Wire Diameter for Power Supply System" for the explanation of "A," "B," "C," "D," and "E," in the above diagrams.

(2) The basic connection diagram of the indoor unit shows the 7P terminal board, so the terminal boards in your equipment may differ from the diagram.

(3) Refrigerant Circuit (R.C.) address should be set before turning the power on.

CAUTION

(1) When linking outdoor units in a network (S-net link system), disconnect the terminal extended from the short plug (CN003, 2P Black, location: right bottom on the outdoor main control PCB) from all outdoor units except any one of the outdoor units.
(When shipping: In shorted condition.)

Otherwise the communication of S-net link system is not performed. For a system without link (no connection wiring between outdoor units), do not remove the short plug.

(2) Do not install the inter-unit control wiring in a way that forms a loop. (Fig. 4-1)

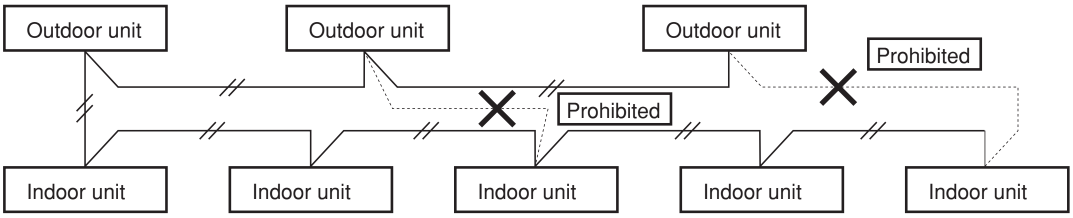


Fig. 4-1

(3) Do not install inter-unit control wiring such as star branch wiring. Star branch wiring causes mis-address setting.

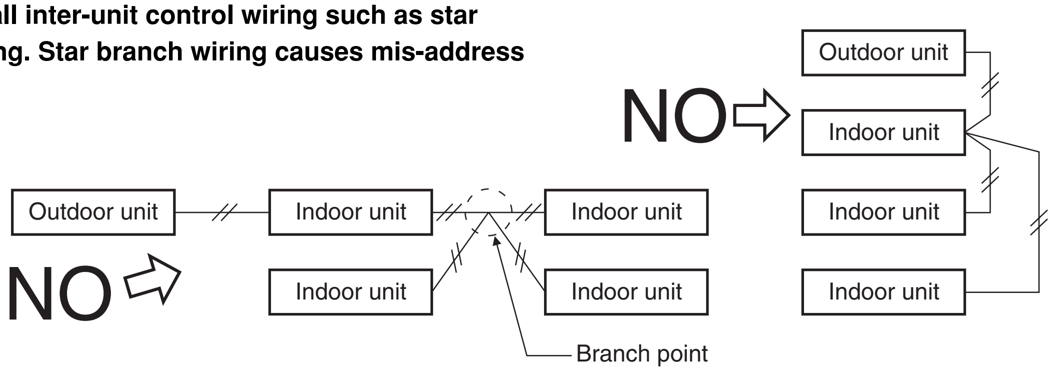


Fig. 4-2

(4) If branching the inter-unit control wiring, the number of branch points should be 16 or fewer.
(Branches less than 1 m are not included in the total branch number.) (Fig. 4-3)

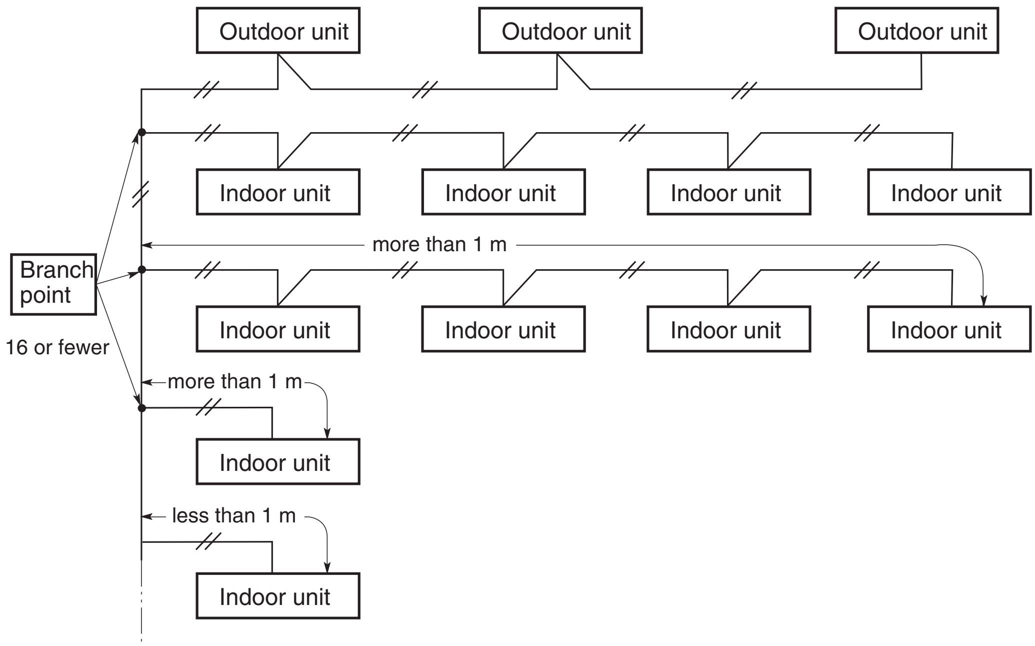


Fig. 4-3

(5) Use shielded wires for inter-unit control wiring (c) and ground the shield on both sides, otherwise misoperation from noise may occur. (Fig. 4-4)
Connect wiring as shown in Section "4-3. Wiring System Diagrams."

WARNING **Loose wiring may cause the terminal to overheat or result in unit malfunction. A fire hazard may also exist. Therefore, ensure that all wiring is tightly connected.**

When connecting each power wire to the terminal, follow the instructions on "How to connect wiring to the terminal" and fasten the wire securely with the fixing screw of the terminal plate.

How to connect wiring to the terminal

■ For stranded wiring

(1) Cut the wire end with cutting pliers, then strip the insulation to expose the stranded wiring about 10 mm and tightly twist the wire ends. (Fig. 4-5)

(2) Using a Phillips head screwdriver, remove the terminal screw(s) on the terminal plate.

(3) Using a ring connector fastener or pliers, securely clamp each stripped wire end with a ring pressure terminal.

(4) Place the ring pressure terminal, and replace and tighten the removed terminal screw using a screwdriver. (Fig. 4-6)

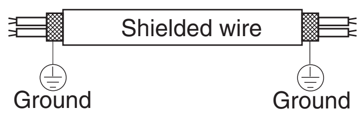


Fig. 4-4

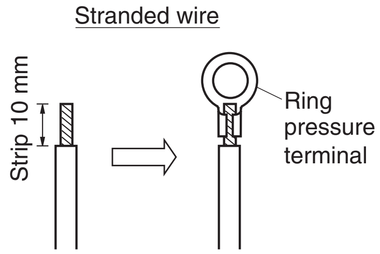


Fig. 4-5

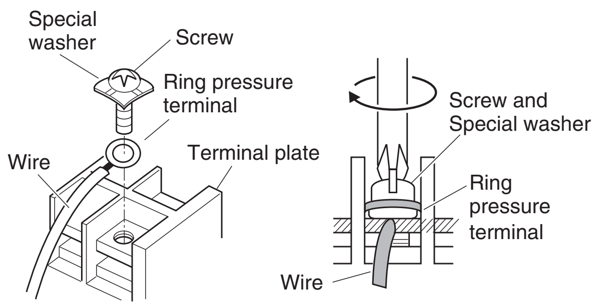


Fig. 4-6

5. HOW TO PROCESS TUBING

The narrow tubing side is connected by a flare nut, and the wide tubing side is connected by brazing.

5-1. Connecting the Refrigerant Tubing

Use of the Flaring Method

Many of conventional split system air conditioners employ the flaring method to connect refrigerant tubes which run between indoor and outdoor units. In this method, the copper tubes are flared at each end and connected with flare nuts.

Flaring Procedure with a Flare Tool

(1) Cut the copper tube to the required length with a tube cutter. It is recommended to cut approx. 30 – 50 cm longer than the tubing length you estimate.

(2) Remove burrs at the end of the copper tube with a tube reamer or file. This process is important and should be done carefully to make a good flare. (Fig. 5-1)

NOTE

When reaming, hold the tube end downward and be sure that no copper scraps fall into the tube. (Fig. 5-2)

(3) Remove the flare nut from the unit and be sure to mount it on the copper tube.

(4) Make a flare at the end of copper tube with a flare tool.* (Fig. 5-3)

(*Use “RIGID®” or equivalent.)

NOTE

A good flare should have the following characteristics:

- inside surface is glossy and smooth
- edge is smooth
- tapered sides are of uniform length

Deburring

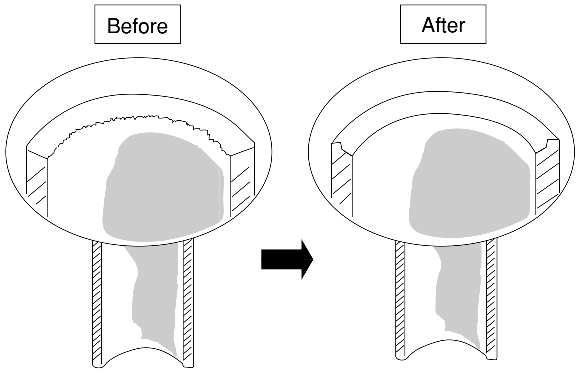


Fig. 5-1

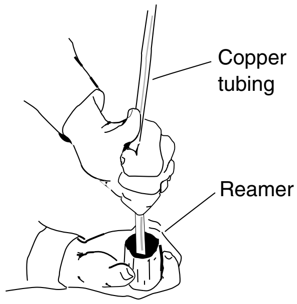


Fig. 5-2

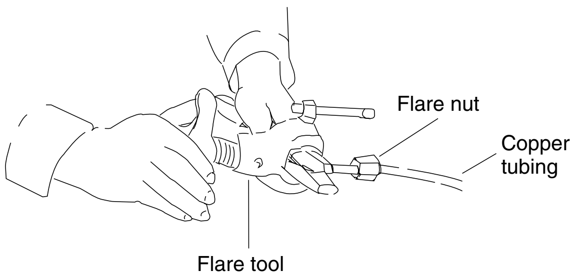


Fig. 5-3

Caution Before Connecting Tubes Tightly

(1) Apply a sealing cap or water-proof tape to prevent dust or water from entering the tubes before they are used.

(2) Be sure to apply refrigerant lubricant to the matching surfaces of the flare and union before connecting them together. This is effective for reducing gas leaks. (Fig. 5-4)

(3) For proper connection, align the union tube and flare tube straight with each other, then screw in the flare nut lightly at first to obtain a smooth match. (Fig. 5-5)

- Adjust the shape of the narrow tube (liquid tube) using a tube bender at the installation site and connect it to the narrow tubing side (liquid tubing side) valve using a flare.

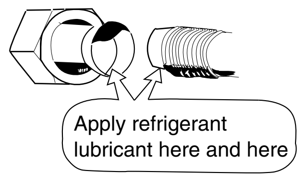


Fig. 5-4

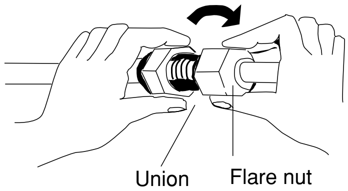


Fig. 5-5

Cautions During Brazing

- **Replace air inside the tube with nitrogen gas to prevent copper oxide film from forming during the brazing process. (Oxygen, carbon dioxide and Freon are not acceptable.)**
- **Do not allow the tubing to get too hot during brazing. The nitrogen gas inside the tubing may overheat, causing refrigerant system valves to become damaged. Therefore allow the tubing to cool when brazing.**
- **Use a reducing valve for the nitrogen cylinder.**
- **Do not use agents intended to prevent the formation of oxide film. These agents adversely affect the refrigerant and refrigerant oil, and may cause damage or malfunctions.**

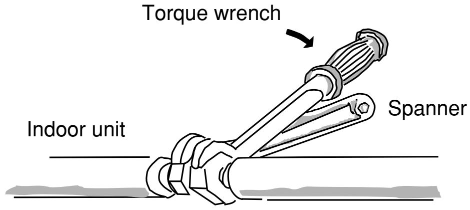


Fig. 5-6

5-2. Connecting Tubing Between Indoor and Outdoor Units

(1) Tightly connect the indoor-side refrigerant tubing extended from the wall with the outdoor-side tubing.

(2) To fasten the flare nuts, apply specified torque as at right:

- When removing the flare nuts from the tubing connections, or when tightening them after connecting the tubing, be sure to use 2 monkey wrenches or spanners as shown. (Fig. 5-6)
  If the flare nuts are over-tightened, the flare may be damaged, which could result refrigerant leakage and cause in injury or asphyxiation to room occupants.
- For the flare nuts at tubing connections, be sure to use the flare nuts that were supplied with the unit, or else flare nuts for R410A (type 2). The refrigerant tubing that is used must be of the correct wall thickness as shown in the table at right.

Tube diameter	Tightening torque, approximate	Tube thickness
ϕ6.35 (1/4")	14 – 18 N · m (140 – 180 kgf · cm)	0.8 mm
ϕ9.52 (3/8")	34 – 42 N · m (340 – 420 kgf · cm)	0.8 mm
ϕ12.7 (1/2")	49 – 61 N · m (490 – 610 kgf · cm)	0.8 mm
ϕ15.88 (5/8")	68 – 82 N · m (680 – 820 kgf · cm)	1.0 mm

Because the pressure is approximately 1.6 times higher than conventional refrigerant pressure, the use of ordinary flare nuts (type 1) or thin-walled tubes may result in tube rupture, injury, or asphyxiation caused by refrigerant leakage.

- In order to prevent damage to the flare caused by over-tightening of the flare nuts, use the table above as a guide when tightening.
- When tightening the flare nut on the narrow tube, use a monkey wrench with a nominal handle length of 200 mm.

5-3. Insulating the Refrigerant Tubing

Tubing Insulation

- Thermal insulation must be applied to all unit tubing, including distribution joint (purchased separately).
  * For gas tubing, the insulation material must be heat resistant to 120°C or above. For other tubing, it must be heat resistant to 80°C or above.

  Insulation material thickness must be 10 mm or greater.

  If the conditions inside the ceiling exceed DB 30°C and RH 70%, increase the thickness of the gas tubing insulation material by 1 step.

CAUTION

If the exterior of the outdoor unit valves has been finished with a square duct covering, make sure you allow sufficient space to use the valves and to allow the panels to be attached and removed.

Taping the flare nuts

Wind the white insulation tape around the flare nuts at the wide tube connections. Then cover up the tubing connections with the flare insulator, and fill the gap at the union with the supplied black insulation tape. Finally, fasten the insulator at both ends with the supplied vinyl clamps. (Fig. 5-8)

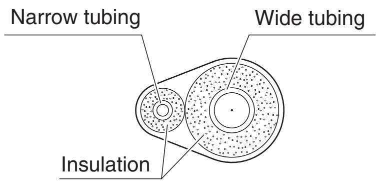
Insulation material

The material used for insulation must have good insulation characteristics, be easy to use, be age resistant, and must not easily absorb moisture.

CAUTION

After a tube has been insulated, never try to bend it into a narrow curve because it can cause the tube to break or crack.

Two tubes arranged together



Three tubes arranged together

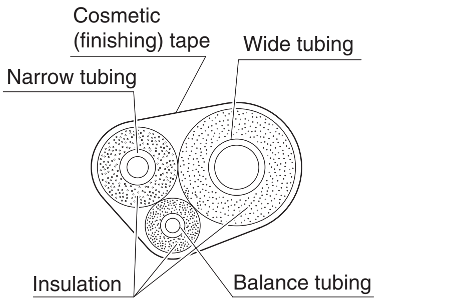


Fig. 5-7

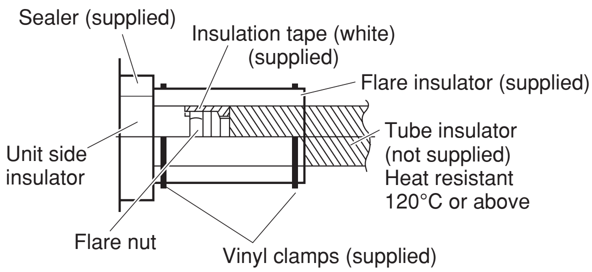


Fig. 5-8

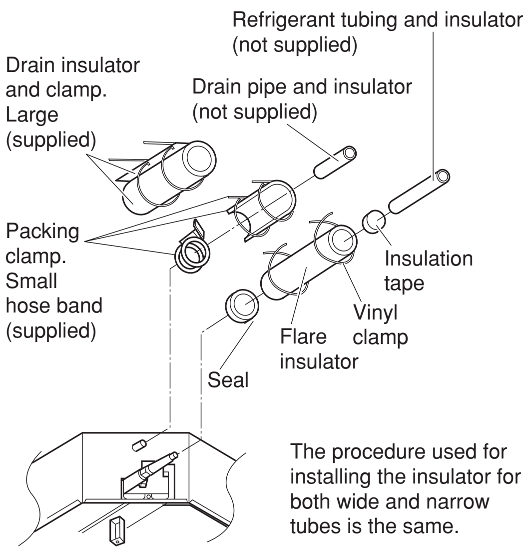


Fig. 5-9

Never grasp the drain or refrigerant connecting outlets when moving the unit.

5-4. Taping the Tubes

(1) At this time, the refrigerant tubes (and electrical wiring if local codes permit) should be taped together with armoring tape in 1 bundle. To prevent the condensation from overflowing the drain pan, keep the drain hose separate from the refrigerant tubing.

(2) Wrap the armoring tape from the bottom of the outdoor unit to the top of the tubing where it enters the wall. As you wrap the tubing, overlap half of each previous tape turn.

(3) Clamp the tubing bundle to the wall, using 1 clamp approx. each meter. (Fig. 5-10)

NOTE

Do not wind the armoring tape too tightly since this will decrease the heat insulation effect. Also ensure that the condensation drain hose splits away from the bundle and drips clear of the unit and the tubing.

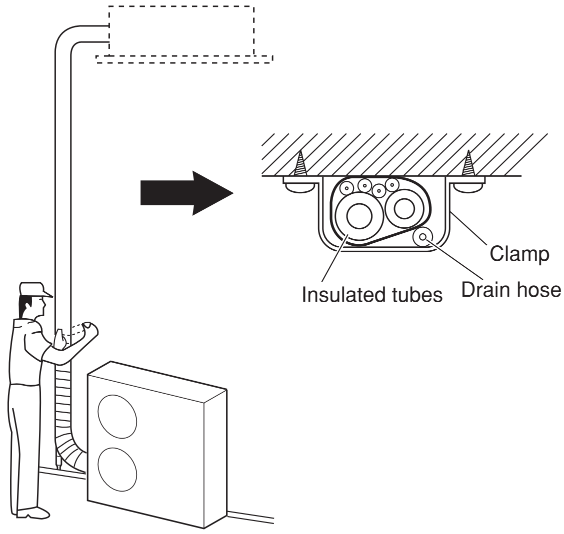


Fig. 5-10

5-5. Finishing the Installation

After finishing insulating and taping over the tubing, use sealing putty to seal off the hole in the wall to prevent rain and draft from entering. (Fig. 5-11)

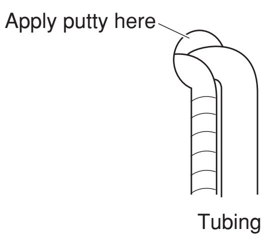
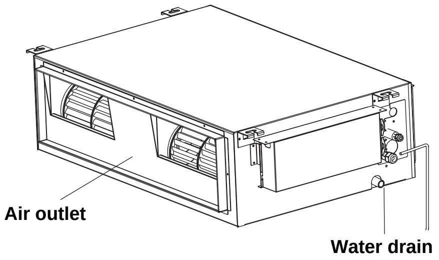
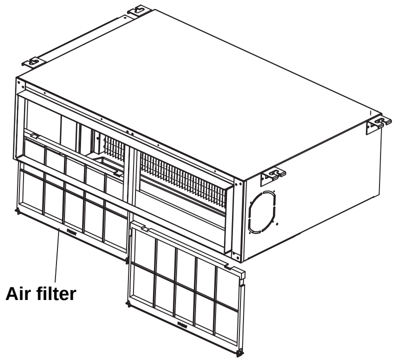


Fig. 5-11

6. APPENDIX

■ Name of Parts (Indoor Unit)





■ Care and Cleaning

WARNING

1. **For safety, be sure to turn the air conditioner off and also to disconnect the power before cleaning.**
2. **Do not pour water on the indoor unit to clean it. This will damage the internal components and cause an electric shock hazard.**

Air intake and outlet side (Indoor unit) Clean the air intake and outlet side of the indoor unit with a vacuum cleaner brush, or wipe them with a clean, soft cloth.

CAUTION

1. **Never use solvents or harsh chemicals when cleaning the indoor unit. Do not wipe plastic parts using very hot water.**
2. **Some metal edges and the fins are sharp and may cause injury if handled improperly; be especially careful when you clean these parts.**
3. **The internal coil and other components of the outdoor unit must be cleaned every year. Consult your dealer or service center.**

Air filter The air filter collects dust and other particles from the air and should be cleaned at regular intervals as indicated in the table below or when the filter indication (▦) on the display of the remote control unit (wired type) shows that the filter needs cleaning. If the filter gets blocked, the efficiency of the air conditioner drops greatly.

Type	Period
UMR	Six months

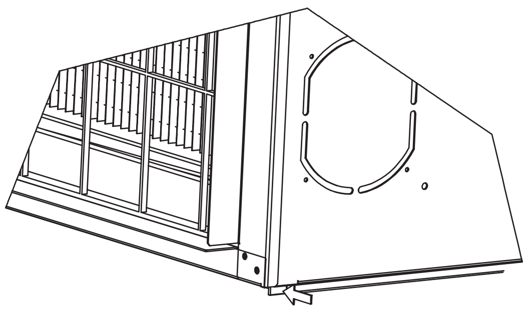
NOTE

The frequency with which the filter should be cleaned depends on the environment in which the unit is used.

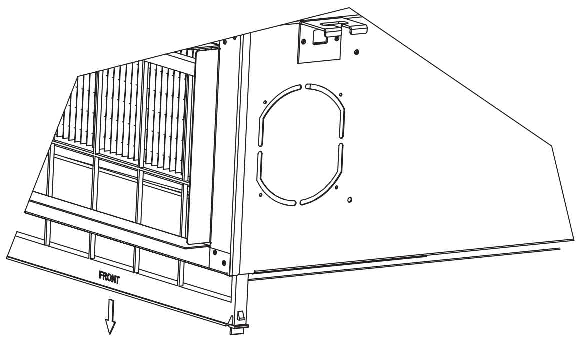
<How to clean the filter>

1. Remove the air filter from the air intake grille.
2. Use a vacuum cleaner to remove light dust. If there is sticky dust on the filter, wash the filter in lukewarm, soapy water, rinse it in clean water, and dry it.

1.



2.



CAUTION

1. **Certain metal edges and the condenser fins are sharp and may cause injury if handled improperly; special care should be taken when you clean these parts.**
2. **Periodically check the outdoor unit to see if the air outlet or air intake is clogged with dirt or soot.**
3. **The internal coil and other components of the outdoor unit must also be cleaned periodically. Consult your dealer or service center.**

Care: After a prolonged idle period

Check the indoor and outdoor unit air intakes and outlets for blockage; if there is a blockage, remove it.

Care: Before a prolonged idle period

- Operate the fan for half a day to dry out the inside.
- Disconnect the power supply and also turn off the circuit breaker.
- Clean the air filter and replace it in its original position.
- Outdoor unit internal components must be checked and cleaned periodically. Contact your local dealer for this service.

■ Troubleshooting

If your air conditioner does not work properly, first check the following points before requesting service. If it still does not work properly, contact your dealer or a service center.

Trouble	Possible Cause	Remedy
Air conditioner does not run at all	1. Power failure. 2. Leakage circuit breaker has tripped. 3. Line voltage is too low. 4. Operation button is turned off. 5. The wired remote control unit or heat pump is malfunctioning. (The inspection mark ⚠ and the letters E, F, H, L, P in combination with numbers appear on the LCD of the wired remote control unit.)	1. After a power outage, press ON/OFF operation button on the wired remote control unit. 2. Contact service center. 3. Consult your electrician or dealer. 4. Press the button again. 5. Consult your dealer.
Compressor runs but soon stops	1. Obstruction in front of condenser coil	1. Remove obstruction
Poor cooling (or heating) performance	1. Dirty or clogged air filter. 2. Heat source or many people in room. 3. Doors and/or windows are open. 4. Obstacle near air intake or air discharge port. 5. Thermostat is set too high for cooling (or too low for heating). 6. (Defrosting system does not work.)	1. Clean air filter to improve the airflow. 2. Eliminate heat source if possible. 3. Shut them to keep the heat (or cold) out. 4. Remove it to ensure good airflow. 5. Set the temperature lower (or higher). 6. (Consult your dealer.)

■ Tips for Energy Saving

Avoid

- **Do not block the air intake and outlet of the unit. If either is obstructed, the unit will not work well, and may be damaged.**
- Do not let direct sunlight into the room. Use sunshades, blinds or curtains. If the walls and ceiling of the room are warmed by the sun, it will take longer to cool the room.

Do

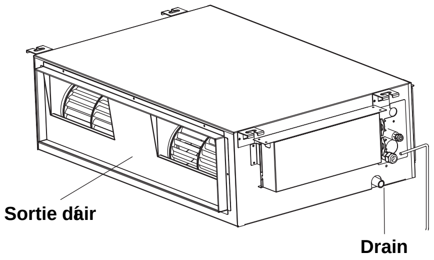
- Always try to keep the air filter clean. (Refer to “Care and Cleaning.”) A clogged filter will impair the performance of the unit.
- To prevent conditioned air from escaping, keep windows, doors and any other openings closed.

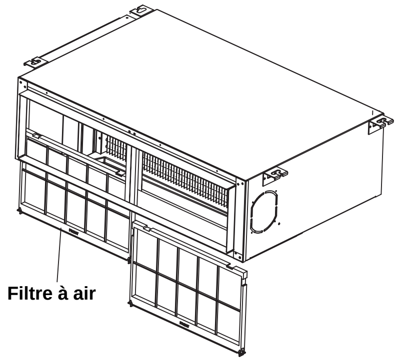
NOTE

Should the power fail while the unit is running

If the power supply for this unit is temporarily cut off, the unit will automatically resume operation once power is restored using the same settings before the power was interrupted.

■ Nom des pièces (unité intérieure)





■ Entretien et nettoyage

AVERTISSEMENT

1. **Pour toute sécurité, éteignez le climatiseur et débranchez-le de la prise secteur.**
2. **Ne versez pas d'eau sur l'unité intérieure pour la nettoyer. Cela pourrait abîmer les composants internes et provoquer des décharges électriques.**

L'arrivée d'air et la sortie d'air (unité intérieure) Nettoyez l'arrivée d'air et la sortie de l'unité intérieure avec la brosse d'un aspirateur ou les essuyer avec un chiffon propre et doux.

ATTENTION

1. **Ne utilisez jamais de dissolvants ni de produits chimiques puissants lorsque l'unité intérieure est nettoyée. N'essuyez pas les pièces en plastique avec de l'eau très chaude.**
2. **Certains bords métalliques et les ailettes étant coupants, ils doivent être manipulés avec précaution lors du nettoyage sous peine de provoquer des blessures.**
3. **La bobine interne et les autres composants de l'unité extérieure doivent être nettoyés tous les ans. Consultez le concessionnaire ou un service après-vente.**

Filtre à air Le filtre à air recueille la poussière et les particules se trouvant dans l'air et doit être nettoyé à intervalles réguliers comme indiqué dans le tableau cidessous ou lorsque le symbole du filtre (▦) affiché sur la télécommande (avec fil) indique que le filtre doit être nettoyé. Si le filtre est bloqué, l'efficacité du climatiseur diminue nettement.

Type	Période
UMR	Six mois

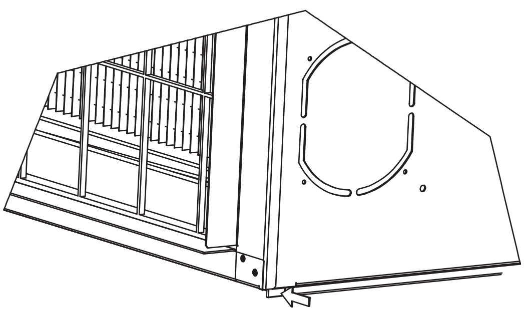
REMARQUE

La fréquence de nettoyage du filtre dépend de l'environnement dans lequel l'unité est utilisée.

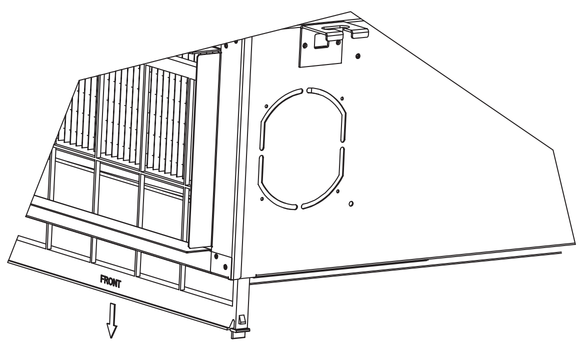
<Comment nettoyer le filtre>

1. Retirez le filtre à air de la grille de l'arrivée d'air.
2. Se servir d'un aspirateur pour enlever la poussière légère. Si de la poussière adhère au filtre, lavez celui-ci dans de l'eau tiède et savonneuse, puis rincez-le dans de l'eau propre et séchez-le.

1.



2.



ATTENTION

1. **Certains bords métalliques et les ailettes du condensateur étant coupants, ils doivent être manipulés avec précaution lors du nettoyage sous peine de provoquer des blessures.**
2. **Vérifiez régulièrement que la sortie et l'arrivée d'air ne soient pas obstruées par de la poussière ou de la suie.**
3. **La bobine interne et les autres composants de l'unité extérieure doivent être nettoyés régulièrement. Consultez le concessionnaire ou un service après-vente.**

Entretien : après une période d'inactivité prolongée

Vérifiez l'arrivée d'air et la sortie d'air des unités intérieure et extérieure et assurez-vous qu'elles ne sont pas obstruées ; si elles sont obstruées, remédiez à ce problème.

Entretien : avant une période d'inactivité prolongée

- Faites fonctionner le ventilateur pendant une demi-journée pour faire sécher l'intérieur de l'unité.
- Débranchez l'alimentation et mettez le disjoncteur en position arrêt.
- Nettoyez le filtre à air et remettez-le dans sa position initiale.
- Les éléments internes de l'unité extérieur doivent être vérifiés et nettoyés régulièrement. Contactez votre distributeur le plus proche pour effectuer ces opérations.

■ Guide de dépannage

Si le climatiseur ne fonctionne pas correctement, effectuez les vérifications suivantes avant de faire appel à un réparateur. Si le problème persiste, prenez contact avec votre concessionnaire ou avec un service après-vente.

Panne	Cause possible	Remède
Le climatiseur ne fonctionne pas du tout.	1. Coupure de courant. 2. Le disjoncteur a fonctionné. 3. Tension de ligne trop basse. 4. Le bouton de fonctionnement est en position Off. 5. La télécommande avec fil ou la pompe thermique ne fonctionne pas correctement. (La marque díinspection ⚠ et les lettres E, F, H, L, P ainsi que des numéros apparaissent sur l'affichage à cristaux liquides de la télécommande avec fil.)	1. Après une panne de courant, appuyez sur le bouton de marche/arrêt de fonctionnement de la télécommande avec fil. 2. Prenez contact avec un service après-vente. 3. Consultez un électricien ou le concessionnaire. 4. Appuyez à nouveau sur le bouton. 5. Consultez le concessionnaire.
Le compresseur se met en marche mais il s'arrÍte aussitôt.	1. Il y a un obstacle devant la bobine du condensateur.	1. Retirez ce qui fait obstruction.
Refroidissement (ou chauffage) insuffisant.	1. Filtre à air sale ou obstrué. 2. Source de chaleur ou trop de monde dans la pièce. 3. Portes et/ou fenÍtres ouv ertes. 4. Obstacle devant l'arrivée ou la sortie d'air. 5. Le thermostat est réglé sur une température trop élevée pour le refroidissement (ou trop basse pour le chauffage). 6. (Le dégivrage du système ne fonctionne pas.)	1. Nettoyez le filtre à air afin díaméliorer la circulation díair. 2. Si possible, éliminez la source de chaleur. 3. Fermez-les pour empÍcher la pénétration d'air chaud (ou froid). 4. Retirez líobstacle pour assurer une bonne circulation d'air. 5. Réglez la température plus bas (ou plus haut). 6. (Consultez le concessionnaire.)

■ Conseils pour économiser l'énergie

À éviter

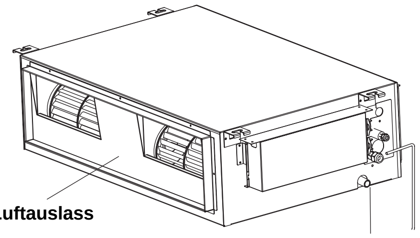
- **Obstruer les arrivées et les sorties d'air de l'appareil. Si elles sont bouchées, l'appareil ne fonctionnera pas de façon satisfaisante et il risque d'être endommagé.**
- Laisser le soleil pénétrer directement dans la pièce. Utiliser des persiennes ou des rideaux. Si les murs et le plafond de la pièce sont chauds sous l'action du soleil, il faudra plus longtemps pour refroidir la pièce.

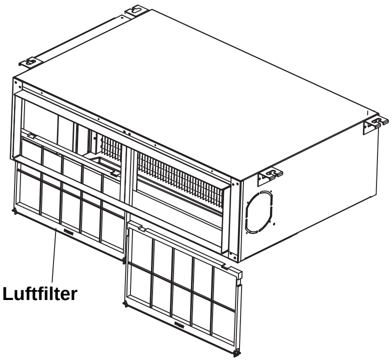
Choses à faire

- Toujours maintenir le filtre à air propre. (Voir "Entretien et nettoyage") Un filtre obstrué risque d'affecter le fonctionnement de l'unité.
- Pour éviter que l'air refroidi ne s'échappe, maintenir toutes les fenêtres, portes et autres ouvertures fermées.

REMARQUE **Si une panne de courant se produit lorsque l'unité fonctionne**
Si l'alimentation de cette unité est temporairement arrêtée, l'unité se remettra en marche, après rétablissement de l'alimentation, avec les mêmes réglages qu'avant la panne de courant.

■ Bezeichnungen der Teile





■ Care and Cleaning

■ Pflege und Reinigung

WARNUNG

1. **Aus Sicherheitsgründen darauf achten, das Gerät vor dem Reinigen auszuschalten und es außerdem vom Netz zu trennen.**
2. **Kein Wasser auf die Inneneinheit schütten, um diese zu reinigen. Dadurch werden die inneren Bauteile beschädigt, und es besteht Stromschlaggefahr.**

Lufteinlass- und -auslassseite (Inneneinheit) Reinigen Sie die Lufteinlass- und -auslassseite der Inneneinheit mit einer Staubsauger-bürste bzw. wischen Sie sie mit einem sauberen weichen Tuch ab.

VORSICHT

1. **Verwenden Sie niemals Lösungsmittel oder starke Chemikalien, um die Inneneinheit zu reinigen. Wischen Sie die Plastikteile nicht mehr sehr heißem Wasser ab.**
2. **Gewisse Metallkanten und die Kondensatorrippen sind scharf und können Verletzungen verursachen, wenn sie nicht richtig gehandhabt werden; beim Reinigen dieser Teile besonders vorsichtig sein.**
3. **Die innere Wärmeaustauscherschlange und andere Bauteile der Außeneinheit müssen einmal im Jahr gereinigt werden. Wenden Sie sich dazu bitte an Ihren Fachhändler oder an eine Kundendienststelle.**

Luftfilter Der Luftfilter sammelt Staub und andere Teilchen aus der Luft und sollte in regelmäßigen Abständen gereinigt werden, wie in der Tabelle unten angezeigt, bzw. wenn die Filteranzeige (▦) auf dem Display der (verdrahteten) Fernbedienung anzeigt, dass der Filter gereinigt werden sollt. Falls der Filter verstopft ist, nimmt der Wirkungsgrad des Klimageräts stark sb.

Typ	Zeitraum
UMR	Sechs Monate

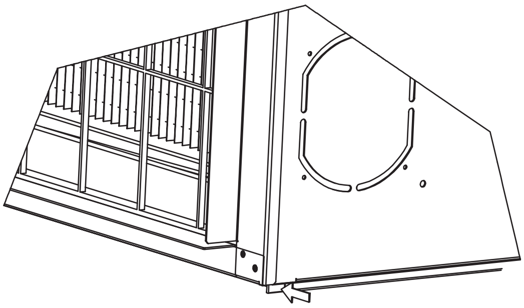
ZUR BEACHTUNG

Die Häufigkeit der Luftfilterreinigung hängt von der Umgebung, in der der Luftfilter verwendet wird, ab.

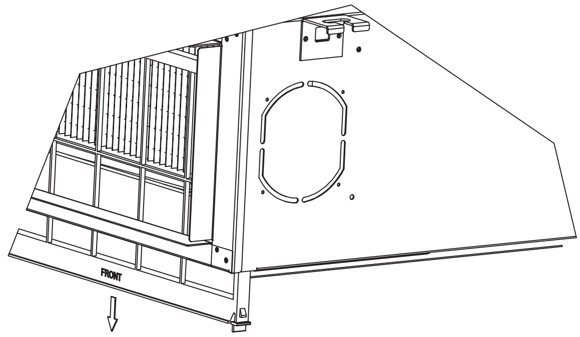
<Reinigen des Luftfilters>

1. Nehmen Sie den Luftfilter aus dem Lufteinlassgitter.
2. Einen Staubsauger verwenden, um leichten Staub zu entfernen. Wenn klebriger Staub am Filter anhaftet, diesen in lauwarmer Seifenlauge auswaschen, mit sauberem Wasser abspülen und trocknen lassen.

1.



2.



VORSICHT

1. **Gewisse Metallkanten und die Kondensatorrippen sind scharf und können Verletzungen verursachen, wenn Sie nicht richtig gehandhabt werden. Seien Sie daher beim Reinigen dieser Teile besonders vorsichtig.**
2. **Überprüfen Sie die Außeneinheit regelmäßig, um zu sehen, ob Luftauslass oder Lufteinlass mit Staub oder Ruß verstopft sind.**
3. **Die innere Wärmeaustauscherschlange und andere Bauteile der Außeneinheit müssen ebenfalls regelmäßig gereinigt werden. Wenden Sie sich dazu bitte an Ihren Fachhändler oder an eine Kundendienststelle.**

Pflege: Wenn das Gerät über längere Zeit nicht verwendet wurde

Überprüfen Sie Lufteinlässe und -auslässe der Innen- und der Außeneinheit auf Verstopfung; ist eine Verstopfung vorhanden, entfernen Sie sie.

Pflege: Wenn das Gerät über längere Zeit nicht verwendet werden soll

- Lassen Sie das Getriebe einen halben Tag lang laufen, um das Innere des Geräts zu trocknen.
- Schalten Sie die Stromversorgung des Geräts aus; schalten Sie dann auch den Trennschalter aus.
- Reinigen Sie den Luftfilter und setzen Sie ihn dann erneut an seiner Ausgangsposition ein.
- Die Innenbauteile der Außeneinheit müssen regelmäßig überprüft und gereinigt werden. Lassen Sie diese Arbeiten von Ihrem Fachhändler durchführen.

■ Fehlersuche

Wenn Ihr Klimagerät nicht richtig funktioniert, zuerst die folgenden Punkte überprüfen, bevor ein Kundendiensttechniker angefordert wird. Läßt sich die Störung nicht beheben, so wenden Sie sich bitte an Ihren Fachhändler oder an eine Kundendienststelle.

Störung	Mögliche Ursache	Abhilfe
Das Klimagerät läuft überhaupt nicht.	1. Keine Stromzufuhr.	1. Drücken Sie nach einem Stromausfall die Betriebstaste (ON/OFF) auf der verdrahteten Fernbedienung.
	2. Der Fehlerstromschutzschalter wurde ausgelöst.	2. Wenden Sie sich an eine Kundendienststelle.
	3. Netzspannung ist zu niedrig.	3. Lassen Sie sich von Ihrem Elektriker oder Fachhändler beraten.
	4. Die Betriebstaste ist ausgeschaltet.	4. Die Taste erneut drücken.
	5. Fehlfunktion der verdrahtete Fernbedienung oder der Wärmepumpe (Das Überprüfungszeichen ⚠ und die Buchstaben E, F, H, L, P zusammen mit Zahlen werden auf der LCD-Anzeige der verdrahtete Fernbedienung angezeigt.)	5. Lassen Sie sich von Ihrem Fachhändler beraten.
Kompressor läuft, kommt jedoch bald zum Stillstand.	1. Ein Hindernis befindet sich vor der Kondensatorschlange.	1. Hindernis entfernen.
Schlechte Kühl- oder Heizleistung	1. Luftfilter ist schmutzig oder zugesetzt.	1. Luftfilter reinigen, um den Luftstrom zu verbessern.
	2. Eine Wärmequelle oder viele Leute befinden sich im Raum.	2. Die Wärmequelle möglichst abschalten.
	3. Türen und/oder Fenster sind geöffnet.	3. Diese schlieflen, damit keine Wärme (bzw. Kälte) von auflen eindringt.
	4. Ein Hindernis befindet sich in der Nähe von Lufteinlass oder Luftauslass.	4. Hindernis entfernen, um einen unbehinderten Luftstrom zu gewährleisten.
	5. Der Thermostat ist zu hoch zum Kühlen eingestellt (bzw. zu niedrig zum Heizen).	5. Temperatur niedriger (bzw. höher) einstellen.
	6. (Abtausystem funktioniert nicht.)	6. (Lassen Sie sich von Ihrem Fachhändler beraten.)

■ Nützliche Hinweise für Energieeinsparung

Zu vermeiden

- **Blockieren Sie den Lufteinlass und -auslass des Gerätes nicht. Falls der Ein- oder Auslass blockiert wird, funktioniert das Gerät nicht richtig und kann sogar beschädigt werden.**
- Setzen Sie den Raum nicht direkter Sonnenbestrahlung aus. Markisen, Jalousien oder Vorhänge verwenden. Wenn die Wände und Decke des Raumes Strahlungswärme von der Sonne aufnehmen, dauert es länger, den Raum zu kühlen.

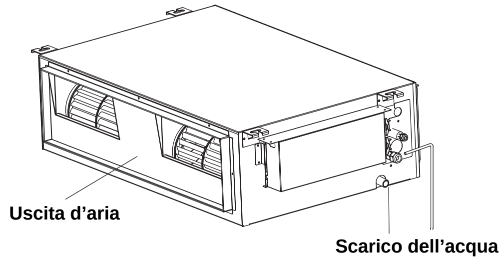
Ja

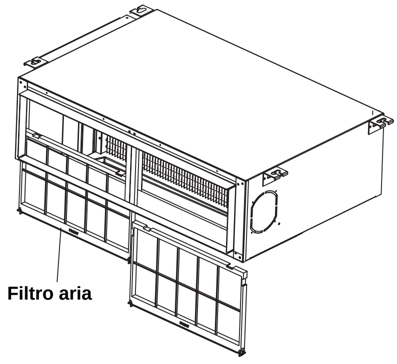
- Den Luftfilter stets sauber halten. (Siehe den Abschnitt „Pflege und Reinigung“.) Ein verstopfter Filter beeinträchtigt die Leistung des Gerätes.
- Um zu verhindern, dass klimatisierte Luft entweicht, Fenster, Türen und andere Öffnungen außer für Lüftungszwecke geschlossen halten.

ZUR BEACHTUNG

Bei einem Stromausfall während des Betriebs des Geräts
Wird die Stromversorgung dieses Geräts vorübergehend unterbrochen, setzt das Gerät den Betrieb nach erneuter Stromversorgung automatisch mit denselben Einstellungen wie vor der Unterbrechung der Stromversorgung fort.

■ Nome delle parti (Unità interna)





■ Cura e manutenzione

AVVERTIMENTO

1. **Per motivi di sicurezza, accertare che il condizionatore d’aria sia spento e che la spina del cavo di alimentazione sia staccata dalla presa di corrente prima di procedere con le operazioni di pulizia.**
2. **Non versare acqua sull’unità interna per pulirla. Ciò può danneggiare i componenti interni e causare il pericolo di scosse.**

Lato presa d’aria e uscita d’aria (unità interna) Pulire il lato della presa d’aria e dell’uscita d’aria dell’unità interna con una spazzola aspirapolvere o con un panno pulito e morbido.

PRECAUZIONE

1. **Per pulire l’unità interna, non si devono usare solventi o sostanze chimiche aggressive. Non pulire i componenti in plastica con acqua molto calda.**
2. **Alcuni bordi metallici e le alette sono taglienti e possono causare ferite se maneggiati in modo incorretto. Prestare perciò la dovuta attenzione nel pulire tali parti.**
3. **La serpentina interna e gli altri componenti dell’unità esterna devono essere puliti una volta all’anno. Rivolgersi al proprio rivenditore o centro di assistenza.**

Filtro dell’aria Il filtro dell’aria raccoglie le particelle di polvere e sporco dall’aria e dovrebbe essere pulito a intervalli regolari, come indicato nella tabella seguente, oppure quando l’indicazione del filtro (▦) sul display del telecomando (tipo cablato) non segnala che occorre pulire il filtro. Se il filtro si ostruisce, l’efficienza del condizionatore d’aria ne risulta notevolmente compromessa.

Tipo	Periodo
UMR	Sei mesi

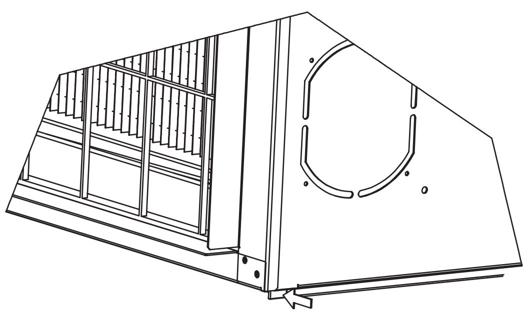
NOTA

La frequenza alla quale occorre pulire il filtro dipende dall’ambiente in cui viene utilizzata l’unità.

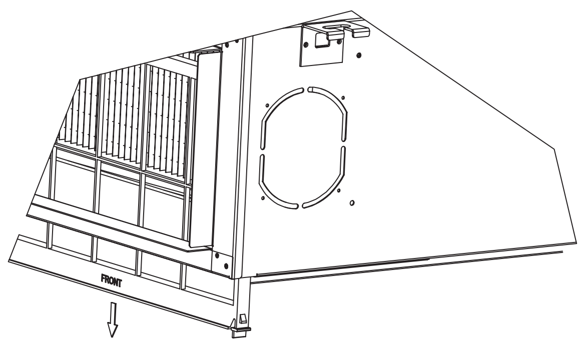
<Pulizia del filtro>

1. Rimuovere il filtro dell’aria dalla griglia della presa d’aria.
2. Rimuovere la polvere leggera servendosi di un aspirapolvere. Se la polvere resta attaccata al filtro, lavarlo con acqua saponata tiepida, sciacquarlo con acqua pulita ed asciugarlo.

1.



2.



PRECAUZIONE

1. **Alcuni bordi metallici e le alette del condensatore sono taglienti e possono causare ferite se maneggiati in modo incorretto; occorre pertanto prestare particolare attenzione nel pulire tali componenti.**
2. **Controllare periodicamente l'unità esterna, accertando che l'uscita d'aria e la presa d'aria non siano ostruite da sporco o fuliggine.**
3. **Anche la bobina interna e altri componenti dell'unità esterna richiedono una pulizia periodica. Rivolgersi al proprio rivenditore o centro di assistenza.**

Cura: dopo un periodo di inattività prolungato

Controllare le prese d'aria e le uscite d'aria delle unità interna ed esterna, verificando che non siano ostruite; eliminare eventuali ostruzioni.

Cura: prima di periodo di inattività prolungato

- Azionare la ventola per mezza giornata per far asciugare l'interno.
- Scollegare l'alimentazione elettrica e disinserire l'interruttore automatico.
- Pulire il filtro dell'aria e rimetterlo nella sua posizione originale.
- I componenti interni dell'unità esterna vanno controllati e puliti periodicamente. A questo scopo rivolgersi al proprio rivenditore locale.

■ Prima di chiamare il tecnico

Se il condizionatore d'aria non funziona correttamente, prima di chiamare il tecnico per la riparazione controllare quanto segue. Se ciò non consente di eliminare il problema, rivolgersi al proprio rivenditore o centro di assistenza.

Problema	Causa probabile	Rimedio
Il condizionatore d'aria non funziona.	1. Si è verificata una mancanza di corrente.	1. Dopo una mancanza di corrente, premere il pulsante di accensione/spegnimento (ON/OFF) del telecomando cablato.
	2. Il salvavita è scattato.	2. Rivolgersi al centro di assistenza.
	3. La tensione di rete è insufficiente.	3. Rivolgersi ad un elettricista o al proprio rivenditore.
	4. Il pulsante di accensione/spegnimento è spento.	4. Premere nuovamente il pulsante.
	5. Il telecomando cablato o la pompa di calore non funziona correttamente. (Sullo schermo LCD del telecomando cablato vengono visualizzati il segno di ispezione ⚠ e le lettere E, F, H, L, P, in combinazione con dei numeri).	5. Rivolgersi al proprio rivenditore.
Il compressore funziona, ma si arresta subito.	1. Presenza di un'ostruzione davanti alla serpentina del condensatore.	1. Rimuovere l'ostruzione.
Le prestazioni di raffreddamento (o di riscaldamento) sono scarse.	1. Il filtro dellíaria è sporco o intasato.	1. Pulire il filtro dell'aria per migliorare il getto dell'aria.
	2. Nella stanza ci sono una fonte di calore o molte persone.	2. Se possibile, eliminate la fonte di calore.
	3. Ci sono porte o finestre aperte.	3. Chiuderle per mantenere il caldo (o il freddo) all'esterno.
	4. C'è un ostacolo vicino alla presa d'aria o all'uscita dell'aria.	4. Rimuoverlo in modo da assicurare un buon getto d'aria.
	5. Il termostato è impostato ad un valore troppo alto per il raffreddamento (o troppo basso per il riscaldamento).	5. Impostare la temperatura a un livello più basso (o più alto).
	6. (Il sistema di sbrinamento non funziona).	6. (Rivolgersi al proprio rivenditore.)

■ Suggerimenti per risparmiare energia

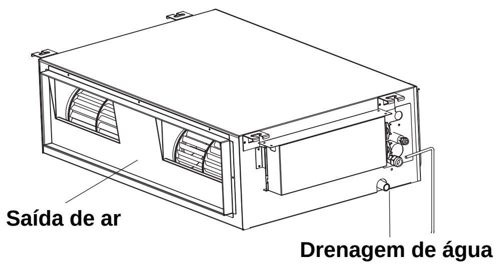
Da evitare
- **Non ostruire la presa d'aria e l'uscita d'aria dell'unità. In caso di ostruzione, l'unità non funziona correttamente e può subire dei danni.**
- Non lasciar entrare la luce solare diretta nella stanza. A tale scopo utilizzare parasole, tende o persiane. Se le pareti e il soffitto vengono riscaldati dal sole, il raffreddamento della stanza richiede più tempo.

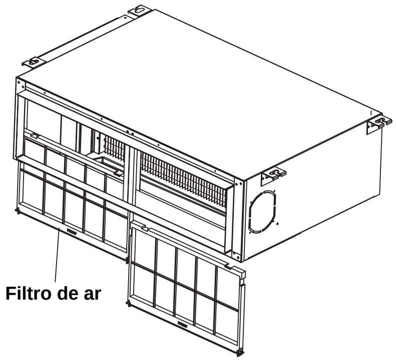
Cose da fare
- Mantenete sempre pulito il filtro dell'aria (fare riferimento a "Cura e manutenzione"). Un filtro ostruito compromette il rendimento dell'unità.
- Per evitare fughe d'aria condizionata, tenete chiuse finestre, porte ed altre aperture.

NOTA

Mancanza di corrente durante il funzionamento dell'unità
In caso di una temporanea mancanza di corrente, l'unità riprende automaticamente a funzionare, al ripristino della corrente, con le stesse impostazioni che aveva prima dell'interruzione.

■ Nomenclatura das peças (unidade interior)





■ Cuidados e limpeza

ADVERTÊNCIA

1. **Por motivos de segurança desligue o aparelho de ar condicionado e desligue-o também da rede antes de proceder à sua limpeza.**
2. **Não verta água sobre a unidade interior para a limpar. Poderá danificar os componentes internos e causar descargas eléctricas.**

Lado de entrada e saída de ar (unidade interior) Limpe o lado de entrada e saída de ar da unidade interior com um aspirador ou com um pano macio e limpo.

PRECAUÇÃO

1. **Nunca utilize solventes ou produtos químicos fortes para limpar a unidade interior. Não limpe as peças plásticas com água muito quente.**
2. **Algumas bordas metálicas e as pás do condensador são pontiagudas e podem causar ferimentos se não forem manuseadas com cuidado; tenha especial cuidado ao limpar estas partes.**
3. **A serpentina interna e outros componentes da unidade exterior devem ser limpos todos os anos. Contacte o seu concessionário ou centro de reparações.**

Filtro de ar O filtro de ar recolhe a poeira e outras partículas do ar. Deve ser limpo em intervalos regulares como indicado na tabela abaixo ou quando a indicação de filtro ( ) aparece no visor da unidade de controlo remoto (com fios) indicando que o filtro deve ser limpo. Se o filtro ficar bloqueado, a eficiência do ar condicionado diminui bastante.

Tipo	Período
UMR	Seis meses

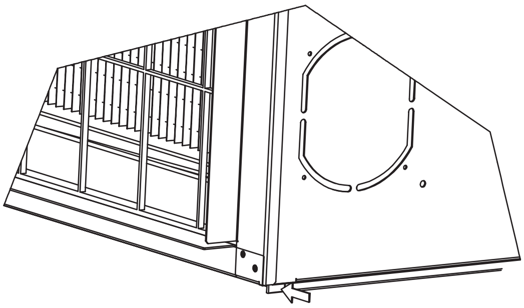
NOTA

A frequência de limpeza do filtro depende do ambiente de utilização da unidade.

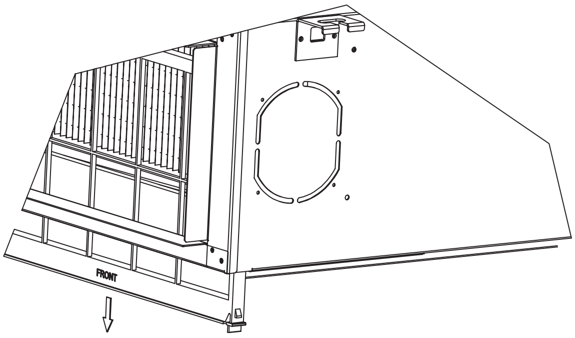
<Como limpar o filtro>

1. Remova o filtro de ar da grelha de entrada de ar.
2. Utilize um aspirador para retirar poeira ligeira. Se houver poeira peganhosa no filtro, lave o filtro com água morna com sabão, passe-o por água limpa e seque-o.

1.



2.



PRECAUÇÃO

1. **Algumas bordas metálicas e as pás do condensador são pontiagudas e podem causar ferimentos se não forem manuseadas com cuidado; tenha especial cuidado ao limpar estas peças.**
2. **Inspeccione periodicamente a unidade exterior para verificar se a entrada ou a saída de ar estão bloqueadas com sujidade ou fuligem.**
3. **A serpentina interna e outros componentes da unidade exterior também devem ser limpos periodicamente. Contacte o seu concessionário ou centro de reparações.**

Atenção: após um período de inactividade prolongado

Verifique se as entradas e saídas de ar da unidade exterior estão bloqueadas. Se estiverem bloqueadas, limpe-as.

Atenção: antes de um período de inactividade prolongado

- Utilize o ventilador durante meio dia para secar o interior da unidade.
- Desligue a unidade da corrente eléctrica e do disjuntor.
- Limpe o filtro de ar e volte a colocá-lo na posição original.
- Os componentes internos da unidade exterior devem ser verificados e limpos periodicamente. Contacte o revendedor local para efectuar esta operação.

■ Resolução de problemas

Se o seu aparelho de ar condicionado não funciona correctamente, verifique primeiro os seguintes pontos antes de solicitar assistência. Se não conseguir solucionar o problema, contacte o seu concessionário ou o serviço de assistência.

Avaria	Causa possível	Solução
O aparelho de ar condicionado não funciona de maneira nenhuma.	1. Falha de alimentação. 2. O disjuntor de fugas foi activado. 3. Tensão de rede demasiado baixa. 4. O botão de operação está desactivado. 5. A unidade de controlo remoto com fios ou a bomba de calor não está a funcionar correctamente. (A marca de inspecção ⚠ e as letras E, F, H, L, P associadas a n˙merosaparecem no LCD da unidade de controlo remoto com fios.)	1. Após uma falha de corrente eléctrica, pressione o botão de operação ON/OFF na unidade de controlo remoto com fios. 2. Contacte o serviço de assistência. 3. Consulte um electricista ou o seu concessionário. 4. Pressione novamente o botão. 5. Consulte o seu concessionário.
O compressor começa a funcionar mas pára pouco depois.	1. Obstrução em frente da serpentina do compressor.	1. Retire a obstrução
Rendimento de arrefecimento (ou aquecimento) deficiente.	1. Filtro de ar sujo ou obstruído 2. Fonte de calor ou demasiadas pessoas na habitação 3. Portas e/ou janelas abertas. 4. Obstáculos perto da entrada ou saída de ar 5. O termóstato está ajustado muito alto para arrefecimento (ou muito baixo para aquecimento). 6. (O sistema de descongelação não funciona.)	1. Limpe o filtro de ar para melhorar a circulação do ar 2. Elimine a fonte de calor se for possível. 3. Feche-as para evitar a entrada de calor (ou frio). 4. Retire os obstáculos para assegurar uma boa circulação de ar. 5. Coloque a temperatura mais baixa (ou mais alta). 6. (Consulte o seu concessionário.)

■ Sugestões para poupar energia

Evite

- **Bloquear a entrada e saída de ar do aparelho. Se estiverem obstruídas, o aparelho não funcionará adequadamente e poderá ficar danificado.**
- SDeixar a luz solar incidir directamente na sala. Use cortinas, venezianas, etc. Se as paredes e o tecto da habitação forem aquecidos pelo sol levará mais tempo para arrefecer a habitação.

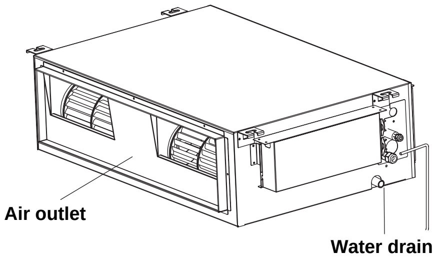
Faça

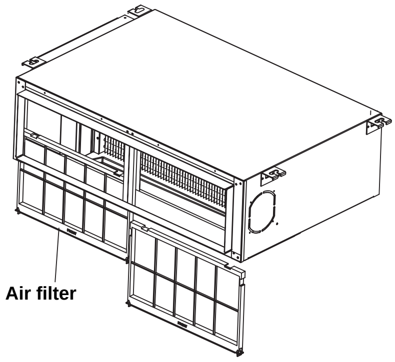
- Procure manter o filtro de ar sempre limpo. (Consulte “Cuidados e limpeza”.) Um filtro obstruído prejudica o rendimento do aparelho.
- Para evitar a saída do ar condicionado, mantenha janelas, portas e outras aberturas fechadas.

NOTA

Se ocorrer uma falha de energia com a unidade a funcionar
Se a corrente eléctrica for cortada temporariamente, a unidade retoma a operação automaticamente após a reposição da corrente eléctrica utilizando os mesmos ajustes programados.

■ Ονόματα μερών (Εσωτερικήμονάδα)





■ Φροντίδα και καθάρισμα

ΠΡΟΕΙΔΟΠΟΙΗΣΗ

1. Για λόγους ασφαλείας, πριν από το καθάρισμα, πρέπει να σβήνετε τη συσκευή κλιματισμού και βγάζετε το ηλεκτρικό καλώδιο από την πρίζα.
2. Μη ρίχνετε νερό στην εσωτερική μονάδα για να την καθαρίσετε. Αυτό θα προκαλέσει βλάβη στα εσωτερικά μέρη και κίνδυνο ηλεκτροπληξίας.

Πλευρά εισόδου και εξόδου αέρα (εσωτερική μονάδα)

Καθαρίστε την πλευρά εισόδου και εξόδου αέρα της εσωτερικής μονάδας με ηλεκτρική σκούπα με βούρτσα ή σκουπίστε τις πλευρές με ένα καθαρό και μαλακό πανί.

ΠΡΟΣΟΧΗ

1. Ποτέ μη χρησιμοποιείτε διαλύτες ή ισχυρές χημικές ουσίες για τον καθαρισμό της εσωτερικής μονάδας. Μη σκουπίζετε τα πλαστικά μέρη χρησιμοποιώντας πολύ ζεστό νερό.
2. Μερικές μεταλλικές μύτες καθώς και τα πτερύγια είναι πολύ αιχμηρά και μπορεί να προκαλέσουν τραυματισμό αν ο χειρισμός τους δεν είναι σωστός. Να είστε ιδιαίτερα προσεκτικοί όταν καθαρίζετε αυτά τα μέρη.
3. Το εσωτερικό πηνίο και άλλα τμήματα της εξωτερικής μονάδας πρέπει να καθαρίζονται κάθε χρόνο. Συμβουλευθείτε τον προμηθευτή σας ή το κέντρο εξυπηρέτησης.

Φίλτρο αέρα

Το φίλτρο αέρα συγκρατεί τη σκόνη και άλλα σωματίδια που βρίσκονται στον αέρα και θα πρέπει να το καθαρίζετε σε τακτά χρονικά διαστήματα όπως υποδεικνύεται στον παρακάτω πίνακα ή όταν η ένδειξη του φίλτρου (▦) στο τηλεχειριστήριο (τύπος με καλώδιο) δείχνει ότι το φίλτρο χρειάζεται καθάρισμα. Αν το φίλτρο φραχτεί, η απόδοση του κλιματιστικού μειώνεται σημαντικά.

Τύπος	UMR
Περίοδος	Έξι μήνες

ΠΑΡΑΤΗΡΗΣΗ

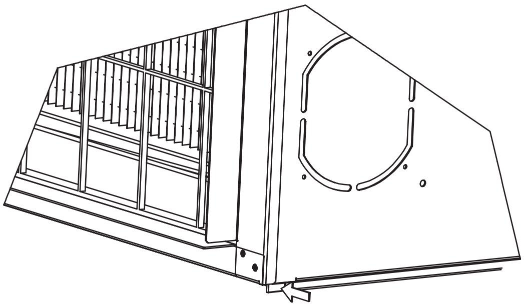
Η συχνότητα με την οποία πρέπει να καθαρίζετε το φίλτρο εξαρτάται από το περιβάλλον στο οποίο χρησιμοποιείται η συσκευή.

Πώς να καθαρίσετε το φίλτρο

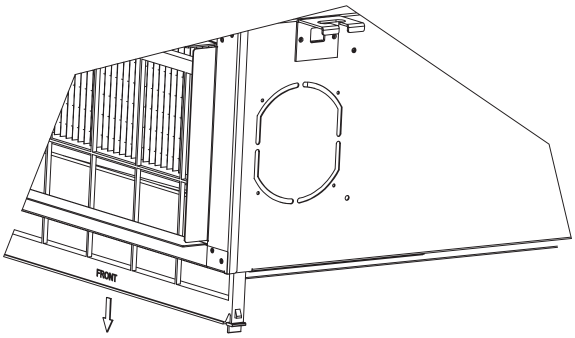
1. Αφαιρέστε το φίλτρο από τη γρίλια εισόδου αέρα.

2. Χρησιμοποιήστε μια ηλεκτρική σκούπα για να αφαιρέσετε τα ελαφριά σωματίδια σκόνης. Αν υπάρχει σκόνη στο φίλτρο, πλύνετε το φίλτρο με χλιαρό σαπουνόνερο, ξεβγάλτε το με καθαρό νερό και στεγνώστε το.

1.



2.



ΠΡΟΣΟΧΗ

1. **Μερικές άκρες μεταλλικών τμημάτων και τα πτερύγια του συμπυκνωτή είναι πολύ αιχμηρά και μπορεί να προκαλέσουν τραυματισμό αν δεν τα χειριστείτε σωστά. Να είστε ιδιαίτερα προσεκτικοί όταν καθαρίζετε αυτά τα μέρη.**
2. **Ελέγξτε περιοδικά την εξωτερική μονάδα για να βεβαιωθείτε ότι η έξοδος και η είσοδος αέρα δεν εμποδίζονται από σκόνη ή βρομιά.**
3. **Το εσωτερικό πηνίο και άλλα εξαρτήματα της εξωτερικής μονάδας πρέπει να καθαρίζονται τακτικά. Συμβουλευθείτε τον προμηθευτή σας ή το κέντρο εξυπηρέτησης.**

Φροντίδα: Μετά από μεγάλη χρονική περίοδο αδράνειας

Ελέγξτε αν εμποδίζονται οι είσοδοι και έξοδοι αέρα των εσωτερικών και εξωτερικών μονάδων. Αν υπάρχει κάποιο εμπόδιο, αφαιρέστε το.

Φροντίδα: Πριν από μεγάλη χρονική περίοδο αδράνειας

- Θέστε τον ανεμιστήρα σε λειτουργία για μισή μέρα ώστε να στεγνώσει το εσωτερικό του.
- Αποσυνδέστε την ηλεκτρική παροχή και επίσης κλείστε την ασφάλεια.
- Καθαρίστε το φίλτρο αέρα και τοποθετήστε το ξανά στην αρχική του θέση.
- Πρέπει να ελέγξετε τα εσωτερικά μέρη της εξωτερικής μονάδας και να τα καθαρίζετε περιοδικά. Για την εργασία αυτή, επικοινωνήστε με τον τοπικό σας αντιπρόσωπο.

■ Αντιμετώπιση προβλημάτων

Αν το κλιματιστικό σας δεν λειτουργεί σωστά, ελέγξτε πρώτα τα ακόλουθα σημεία πριν ζητήσετε κάποια εργασία επισκευής. Αν η συσκευή συνεχίζει να μη λειτουργεί σωστά, ειδοποιήστε τον προμηθευτή σας ή το κέντρο εξυπηρέτησης.

Πρόβλημα	Πιθανή αιτία	Λύση
Το κλιματιστικό δεν λειτουργεί καθόλου.	1. Έχει συμβεί διακοπή ηλεκτρικού ρεύματος.	1. Μετά από διακοπή ρεύματος, πιέστε το κουμπί λειτουργίας ON/OFF στο τηλεχειριστήριο με καλώδιο.
	2. Αποσυνδέθηκε ο διακόπτης ηλεκτρικής διαρροής.	2. Επικοινωνήστε με το κέντρο εξυπηρέτησης.
	3. Η τάση του ηλεκτρικού ρεύματος είναι πολύ χαμηλή.	3. Συμβουλευτείτε έναν ηλεκτρολόγο ή τον προμηθευτή σας.
	4. Το κουμπί λειτουργίας βρίσκεται στην ανενεργή θέση.	4. Πατήστε ξανά το κουμπί.
	5. Το τηλεχειριστήριο με καλώδιο ή η αντλία θέρμανσης δεν λειτουργεί σωστά. (Στην οθόνη του τηλεχειριστηρίου με καλώδιο εμφανίζεται η ένδειξη επιθεώρησης ⚠ και τα γράμματα E, F, H, L, P μαζί με αριθμούς).	5. Συμβουλευτείτε τον προμηθευτή.
Ο συμπιεστής λειτουργεί αλλά σταματά μετά από σύντομο χρονικό διάστημα.	1. Υπάρχει εμπόδιο μπροστά από το πηνίο του συμπυκνωτή.	1. Απομακρύνετε το εμπόδιο.
Ανεπαρκής απόδοση ψύξης (ή θέρμανσης).	1. Το φίλτρο αέρα είναι βρόμικο ή φραγμένο.	1. Καθαρίστε το φίλτρο αέρα για τη βελτίωση της ροής του αέρα.
	2. Υπάρχει πηγή θερμότητας ή πολύς κόσμος στο δωμάτιο.	2. Αν είναι δυνατόν απομακρύνετε την πηγή θερμότητας.
	3. Οι πόρτες ή/και τα παράθυρα είναι ανοιχτά.	3. Κλείστε τις πόρτες και τα παράθυρα για να απομονώσετε τη θερμότητα (ή το κρύο) έξω.
	4. Υπάρχει εμπόδιο κοντά στην είσοδο ή στην έξοδο του αέρα.	4. Αφαιρέστε το για να εξασφαλίσετε την καλή ροή του αέρα.
	5. Ο θερμοστάτης είναι ρυθμισμένος πολύ υψηλά για ψύξη (ή πολύ χαμηλά για θέρμανση).	5. Ρυθμίστε τη θερμοκρασία σε μια χαμηλότερη (ή υψηλότερη) τιμή.
	6. (Το σύστημα απόψυξης δε λειτουργεί).	6. (Συμβουλευτείτε τον προμηθευτή).

■ Υποδείξεις για εξοικονόμησηενέργειας

Αποφύγετε

- **Μην εμποδίζετε την είσοδο και την έξοδο αέρα της συσκευής. Αν αυτές εμποδίζονται, η συσκευή δε θα λειτουργεί σωστά και μπορεί να προκληθεί βλάβη.**
- Μην αφήνετε το ηλιακό φως να μπαίνει απευθείας στο δωμάτιο. Χρησιμοποιήστε αλεξήλια, περσίδες ή κουρτίνες. Αν οι τοίχοι και το ταβάνι του δωματίου θερμανθούν από τον ήλιο, θα απαιτηθεί περισσότερος χρόνος για την ψύξη του δωματίου.

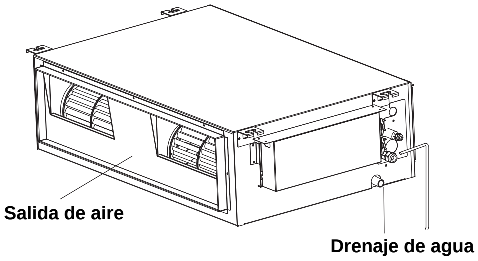
Τι να κάνετε

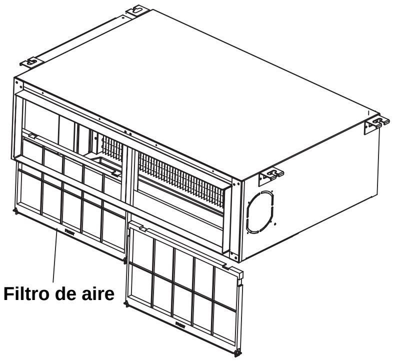
- Το φίλτρο αέρα πρέπει να είναι πάντα καθαρό. (Ανατρέξτε στην παράγραφο «Φροντίδα και καθάρισμα».) Ένα φραγμένο φίλτρο θα μειώσει την απόδοση της συσκευής.
- Εμποδίζετε τη διαφυγή του κλιματισμένου αέρα διατηρώντας παράθυρα, πόρτες και κάθε είδους ανοίγματα κλειστά.

ΠΑΡΑΤΗΡΗΣΗ **Σε περίπτωση διακοπής ρεύματος ενώ λειτουργεί η μονάδα**

Αν η ηλεκτρική παροχή της συσκευής διακοπεί προσωρινά, μόλις επανέλθει το ηλεκτρικό ρεύμα, θα επαναφερθεί αυτόματα η λειτουργία της συσκευής με τις ίδιες ρυθμίσεις που υπήρχαν πριν τη διακοπή.

■ Nombres de las partes (unidad interior)





■ Cuidados y limpieza

ADVERTENCIA

1. **Por motivos de seguridad, asegúrese de apagar el acondicionador de aire, y desconectarlo también de la red eléctrica antes de realizar su limpieza.**
2. **No vierta agua sobre la unidad interior para limpiarla. El agua podría estropear los componentes internos y producir una descarga eléctrica.**

Lados de entrada y salida de aire (Unidad interior) Limpie los lados de entrada y salida de aire de la unidad interior con el cepillo de una aspiradora, o límpielos con un paño limpio y suave.

PRECAUCIÓN

1. **No utilice nunca disolventes o productos químicos ásperos cuando limpie la unidad interior. No limpie las partes de plástico con agua muy caliente.**
2. **Algunos bordes metálicos y las aletas, al ser puntiagudos, pueden causar heridas si no se manejan con cuidado. Tenga mucho cuidado al limpiar estas piezas.**
3. **El serpentín interno y otros componentes de la unidad exterior deberán limpiarse todos los años. Póngase en contacto con su concesionario o centro de reparaciones.**

Filtro de aire El filtro de aire recoge polvo y otras partículas del aire y deberá ser limpiado a intervalos regulares como se indica en la tabla de abajo o cuando la indicación de filtro (▦) del visualizador de la unidad del mando a distancia (tipo alámbrica) muestre que el filtro necesita ser limpiado. Si se bloquea el filtro, la eficacia del acondicionador de aire disminuirá enormemente.

Tipo	Periodo
UMR	Seis meses

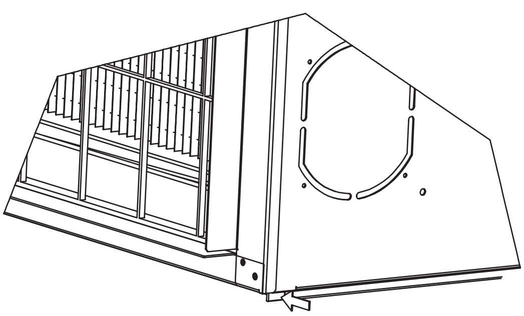
NOTA

La frecuencia con que deberá ser limpiado el filtro de aire dependerá del entorno en el que se utilice la unidad.

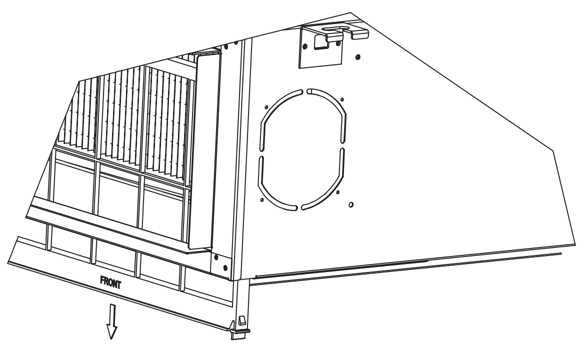
<Cómo limpiar el filtro>

1. Extraiga el filtro de aire de la rejilla de entrada de aire.
2. Utilice una aspiradora para quitar el polvo ligero. Si en el filtro hay polvo pegado, lave el filtro con agua enjabonada templada, enjuáguelo en agua limpia y séquelo.

1.



2.



PRECAUCIÓN

1. **Algunos bordes metálicos y las aletas del condensador son agudos y podrán ocasionar heridas si se manejan incorrectamente; cuando limpie estas partes deberá tener cuidado especial.**
2. **Compruebe periódicamente la unidad exterior para ver si la salida de aire o enterada de aire está obstruida con suciedad u hollín.**
3. **El serpentín interno y otros componentes de la unidad exterior deberán también ser limpiados periódicamente. Póngase en contacto con su concesionario o centro de reparaciones.**

Cuidado: después de un periodo de inactividad prolongado

Compruebe las entradas y salidas de aire de la unidad exterior para ver si están obstruidas; si hay una obstrucción, quítela.

Cuidado: antes de un periodo de inactividad prolongado

- Haga funcionar el ventilador durante medio día para secar el interior.
- Desconecte el suministro eléctrico y desactive también el disyuntor.
- Limpie el filtro de aire y vuelva a ponerlo en su posición original.
- Los componentes internos de la unidad exterior deberán ser comprobados y limpiados periódicamente. Póngase en contacto con su distribuidor local para este servicio.

■ Localización de averías

Si su acondicionador de aire no funciona correctamente, compruebe primero la lista de abajo antes de llamar al servicio de reparaciones. Si no puede solucionar el problema, póngase en contacto con su concesionario o centro de reparaciones.

Avería	Causa posible	Remedio
El acondicionador de aire no funciona en absoluto.	1. Corte de alimentación eléctrica. 2. Ha saltado el ruptor de fugas. 3. La tensión de la línea es demasiado baja. 4. El botón de operación está desactivado. 5. La unidad de mando a distancia alámbrica o la bomba de calor está funcionando mal. (En el LCD de la unidad de mando a distancia alámbrica aparece la marca de inspección ⚠ y las letras E, F, H, L, P en combinación con números.)	1. Después de una interrupción del suministro eléctrico, pulse el botón de operación ON/OFF en la unidad de mando a distancia alámbrica. 2. Póngase en contacto con el centro de reparaciones. 3. Póngase en contacto con un electricista o con su concesionario. 4. Pulse el botón otra vez. 5. Consulte a su distribuidor.
El compresor se pone en funcionamiento pero se para pronto.	1. Obstrucción delante del serpentín del condensador.	1. Retire la obstrucción.
Mal enfriamiento (o calefacción).	1. Filtro de aire sucio u obstruido. 2. Fuente de calor o muchas personas en la sala. 3. Puertas y/o ventanas abiertas. 4. Obstáculos cerca de la entrada o salida de aire. 5. El termostato está ajustado demasiado alto para enfriamiento (o demasiado bajo para calefacción). 6. (El sistema de descongelación no funciona.)	1. Limpie el filtro de aire para mejorar la circulacióndel aire. 2. Elimine la fuente de calor si fuese posible. 3. Ciérrelas para que no entre el calor (o el frío). 4. Quite los obstáculos para asegurar una buena circulación del aire 5. Fije una temperatura m·s baja (o más alta). 6. (Consulte a su distribuidor.)

■ Sugerencias para ahorrar energía

Evite

- **No bloquee la entrada y salida de aire de la unidad. Si cualquiera de ellas está obstruida, la unidad no funcionará bien, y podrá dañarse.**
- No deje que entre luz solar directa en la habitación. Utilice parasoles, persianas o cortinas. Si el sol calienta las paredes y el techo de la sala, se tardará más tiempo en enfriarla.

Sí

- Mantenga siempre limpio el filtro de aire. (Refer to “Cuidados y limpieza”.) Un filtro obstruido reducirá el rendimiento de la unidad..
- Para evitar que escape el aire acondicionado, cierre las ventanas, las puertas y otras aberturas.

NOTA

Si ocurre un corte del suministro eléctrico mientras está funcionando la unidad
Si el suministro eléctrico de esta unidad se interrumpe temporalmente, la unidad reanudará automáticamente la operación una vez restablecido el suministro utilizando los mismos ajustes que los de antes de cortarse el suministro eléctrico.